

AMERICAN  
FRUIT CO. INC.

HAPPY

NEW

YEAR



# Firestone

## GROUND GRIP TIRES

*First Choice of Champion Farmers*



FOR GREATER TRACTION  
FOR GREATER SAVING  
OF TIME AND FUEL . .

*Irene Brown, with Mercer, International Grand Champion steer. This steer was purchased by the Firestone Farm Service Bureau. Firestone now has Mercer on an exhibition tour of the cattle feeding states. See your local paper for exact date of Mercer's appearance in your community.*

CHAMPION farmers know that their tractors give top performance only when they are equipped with the tires which deliver *greatest traction*. They also demand greatest economy from their tractors and know they must use the tractor tire which saves them the most *time and fuel*. That is why farmers everywhere follow the practice of champion farmers by selecting and using Firestone Ground Grip Tires. It is only natural that Firestone Ground Grip Tires should lead all other tires in performance, economy and preference, because Firestone pioneered and perfected the first practical pneumatic tractor tire. Farmers also know that Firestone Ground Grip Tires lead all others, because they are the only tires made with these patented advantages:

**Triple-Braced Traction Bars**, which cannot bend, break or tear off.

**52 to 89 Extra Inches** of triple-braced traction bar length give greater earth-biting power.

**32% Greater Triple-Braced Tread Bar Surface Contact** gives increased pulling power.

**21% Flatter Triple-Braced Tread** gives greater shoulder traction.

**Smoother Riding**, because the triple-braced traction bars are joined together.

**Better Cleaning**, because of scientific spacing between the triple-braced traction bars.

**Longer Tire Life**, because of the patented Firestone Gum-Dipping process which protects against penetration of moisture, and provides greater strength. Patented weather-resisting tread compound protects against sun and weather.

**Tread Guaranteed Not to Loosen**, because two extra layers of Gum-Dipped Cords provide inseparable union between the triple-braced tread and cord body.



*For*  
CHAMPIONSHIP  
PERFORMANCE AND  
GREATEST ECONOMY  
INSIST ON FIRESTONE  
GROUND GRIP TIRES  
ON YOUR NEW TRACTOR  
AND ALL WHEELED  
FARM IMPLEMENTS  
★

With the time and fuel you lose every time you operate your tractor on steel-lugged wheels, you could be making a payment on championship Firestone Ground Grip Tire performance. See your nearby Implement Dealer, Firestone Dealer or Firestone Auto Supply and Service Store today — find how little it costs to put your farm on rubber.

Listen to **THE VOICE OF FIRESTONE** featuring Richard Crooks and Margaret Speaks and the 70-piece Firestone Symphony Orchestra, under the direction of Alfred Wallenstein, Monday evenings over Nationwide N. B. C. Red Network.

### LISTEN TO THE FIRESTONE "VOICE OF THE FARM"



Twice each week during the noon hour, over a nationwide radio network, Firestone brings you interviews with champion farmers conducted by Everett Mitchell, famous farm commentator. These interviews give you valuable facts from the experiences of champion farmers to help you increase your yields and profits. Irene Brown, on Thursday and Friday, January 19 and 20, will tell the vast Firestone farm audience how she fed and raised Mercer. Consult your local paper for date your favorite station will make this important broadcast.

### SAFETY PLUS ECONOMY

#### **Firestone CONVOY TIRES**

FOR CARS, TRUCKS AND BUSES

The new Firestone Convoy AS  
Tire—safety, long mileage **LOW \$8.10**  
and blowout protection. AS 4-14-21



### DRIVE AWAY WINTER WORRIES

#### **BATTERIES**

Firestone Extra Power Batteries give up to 35% quicker starting—longer life.



#### **SPARK PLUGS**

Firestone Spark Plugs give smoother operation and save up to 10% in gasoline.



**FIRESTONE PUT THE FARM ON RUBBER**

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JANU



# DU PONT *Pest Control Research* Means Better Crop Protection



▲ Preparing apples for testing of codling moth control. The fruit is exposed in a special chamber.

**I**N the du Pont laboratories chemicals to be tested as insecticides or fungicides are developed from more than 2500 chemicals available for this purpose.

These new products are subjected to tests under controlled conditions which permit results in two or three days which would require weeks in the field. Even with this intensive research, it is months and many times years before a new product measures up to the requirements of du Pont chemists.

The constantly growing number of GRASSELLI Insecticides and Fungicides includes well-known products such as GRASSELLI and NuREXFORM Lead Arsenate. Even these established products are constantly improved to give the grower better control of codling moth and other chewing insects.

When you buy GRASSELLI Insecticides and Fungicides, you are getting the best crop protection that du Pont research can provide.

*Ask your dealer for prices and further information*



◀ In this type of spray test both the table and the plant revolve to insure even distribution of the insecticide.

The temperature and moisture of the greenhouse sections are controlled independently to adjust conditions to different kinds of plants and insects. ▼

## Grasselli

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### PRODUCTS MANUFACTURED OR DISTRIBUTED

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GRASSELLI Wettable Sulfur  
GRASSELLI Calcium Arsenate  
GRASSELLI Dormant and Summer Oils  
DUTOX Barium Fluosilicate  
ALORCO Cryolite  
LORO Contact Insecticide  
Paris Green

NuREXFORM Lead Arsenate  
GRASSELLI Lime Sulfur Dry & Liquid  
GRASSELLI Bordeaux Mixture  
GRASSELLI Spreader-Sticker  
Kopper's Flotation Sulfur Paste  
Black Leaf "40" Nicotine Sulfate  
Dust Mixtures  
Fluxit Spreader

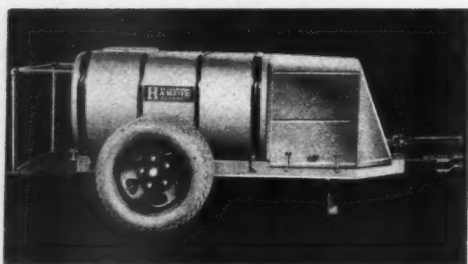
E. I. DU PONT DE NEMOURS & COMPANY, INC.



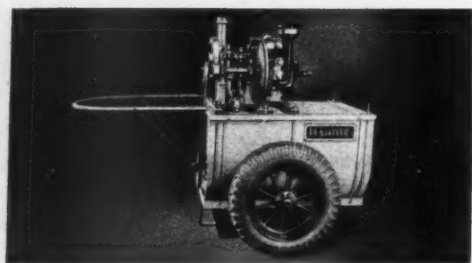
**YOU CAN  
DEPEND ON  
YOUR HARDIE  
*for* LOW  
UP-KEEP**



Hardie sprayers really are streamlined and completely dustproofed.



Hardie builds tractor trailers that carry from 200 gallons to 1000 gallons.



Here's the smaller Hardie power sprayer you have been wanting—the No. 99, 4 gallons per minute at 300 pounds pressure. . . Low priced, readily portable. Many models for fruit trees, small acreages of row crops, gardens, etc.

**O**NLY the Hardie vertical-type crank-shaft-driven pump is able to deliver big capacity and high pressure at slow operating speeds. This is one reason why repair costs on Hardie sprayers are so little that few owners even keep an account of them. Wherever records are kept the figures are almost unbelievable, even after years of operation and millions of gallons pumped. Other reasons for this amazing low upkeep are seen in Hardie design, construction and lubrication system. See how much heavier, stronger, bigger is the Hardie pump in every detail when compared with others of similar catalog rating.

**No other pump provides the complete, selective, clean oil lubrication of every moving part including plungers and plunger cups.**

Know how to judge a sprayer. Learn how to buy one. Write for your copy of the Hardie 1939 Catalog describing many models and types delivering from 4 gallons per minute at 300 pounds pressure to 80 gallons at 1000 pounds. The Hardie Mfg. Company, Hudson, Mich. Branch Factories, Sales and Service Offices . . . Portland, Ore., Los Angeles, Calif., Brockport, N. Y. Export Dept., Detroit, Mich.

**HARDIE**  
*Dependable* **SPRAYERS**

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# AMERICAN FRUIT GROWER



The  
NATIONAL FRUIT MAGAZINE

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## AMERICAN FRUIT GROWER

Published Monthly by

AMERICAN FRUIT GROWER PUBLISHING CO.  
1370 Ontario St., Cleveland, O.

E. G. K. MEISTER  
Publisher

DEAN HALLIDAY Managing Editor	DR. J. H. GOURLEY Associate Editor
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CHICAGO, 123 W. Madison St. Phone—Central  
0445.  
J. C. BILLINGSLEA CO.

### SUBSCRIPTION RATES

Domestic Except Cleveland, 3 years \$1.00, 1 yr. 50c.  
Cleveland and foreign (except Canada) \$1.00 per  
year, Canada, 50c per year.

Entered as second-class matter at Post Office at  
Cleveland, Ohio, under the Act of March 3, 1879.  
Additional entry at Mount Morris, Illinois.

## KING APPLE SITS MORE SECURELY ON HIS THRONE

**T**HAT most benevolent of monarchs, King Apple, can greet the new year with considerable satisfaction. He is in greater favor with the people. His throne is less wobbly than at any time in the past two or three decades. The future looks brighter because the King's men have forgotten geographical and factional differences and are jointly singing the praises of their sovereign throughout the length and breadth of the land. And this is as it should be.

In October, 1935, AMERICAN FRUIT GROWER, alarmed by the public's increasing indifference to the rosy-cheeked monarch's many fine qualities, published a three-point plan designed to keep King Apple on his throne. The three points embraced a national, sectional, and local approach to the problem of advertising and marketing. It was imperative that something be done in an organized way because figures had just been released which revealed that in the five-year period 1930-34 apple consumption was only 58 pounds per capita, or about half the 1899 consumption of 112 pounds per capita.

The plan was received with enthusiasm. The King's men, forgetting to a very large extent their various differences, rallied around his throne and with a spirit of co-operation and willingness for concerted action not previously shown for many years, began the very sizable job of rebuilding the popularity of their sovereign.

The need for a national program of education, extolling the health benefits of apples, as outlined in the plan, is being met—and well met—by the activities of the National Apple Institute. The work of this national organization is vital to the success of the apple industry, and it therefore deserves continued and whole-hearted support, financial and otherwise, from growers, state societies, and advertising and marketing associations.

In advocating sectional organization and effort, the AMERICAN FRUIT GROWER plan pointed out that, "apples can be advertised and marketed to advantage under a sectional geographical designation, such as 'New England Grown Apples,' 'Great Lakes Apples,' 'Shenandoah Valley Apples,' 'Ozark Apples,' 'Washington-Oregon Apples,' or similar sectional brand names."

On this point, too, the King's men clasped hands and pledged concerted action, with the result that today the industry has a number of flourishing sectional and state advertising and marketing organizations. King Apple can now point with pride to the activities of the "New York-New England Apple Institute," to the four states, Virginia, West Virginia, Pennsylvania, and Maryland, now grouped for marketing purposes under the banner of "Appalachian Apples, Inc.," to Michigan's Apple Institute and Bonded Label plan, to the "Ohio Apple Institute," to the "Ozark Fruit Growers Association," and to the State of Washington's new tax-financed apple advertising program.

AMERICAN FRUIT GROWER'S three-point plan also included local advertising and merchandising effort on the part of the individual grower or a group of neighboring growers. Emphasis was placed upon the need for an

appropriate brand name or trade-mark. As was pointed out at the time, such brand name or trade-mark could consist of the name of the orchard, or some local geographical designation which would be appropriate or would appeal to a buyer. Such a name would build up orchard identification, good will, and repeat sales.

It is gratifying, then, for AMERICAN FRUIT GROWER to observe that paralleling the growth of a national institute and the rise of sectional organizations, there has also been a healthy increase in the number of individual growers who are stimulating their roadside and local market sales by the adoption of brand names and trade-marks, and the use of modern advertising methods.

Newest of the developments rapidly rising over the apple advertising horizon are now observed in the Midwest, where industry leaders are busy discussing new ways of financing their marketing endeavors. They have watched the successful use of tax-provided advertising funds in the State of Washington, and now they are laying the groundwork for the presentation of apple advertising proposals to the legislators of their states. Certainly no more important movement has loomed up in all the history of the fruit industry. If the plans of the Midwest leaders are brought to successful conclusion by state laws setting up an advertising tax on all marketable apples, it would seem that this would lead to similar solution of the whole matter of apple promotion everywhere.

All in all, there is no gainsaying the fact that the apple industry has come a long ways in just a few years in the matter of advertising and marketing, and that, as a result, King Apple now sits more securely on his throne.

In wishing everybody associated with the industry a Prosperous New Year, AMERICAN FRUIT GROWER would like to point out, as it did in October of 1935, that the industry will prosper if the King's men will continue to meet the problem of national, sectional, and local advertising and merchandising with the same splendid spirit of co-operation they have shown in recent years.



The job of hauling fruit and vegetables calls for stamina in a truck. The 2 to 3-ton International Model D-40 (shown above) is a favorite for cross-country or farm-to-market hauling.

# QUALITY and SKILL Make INTERNATIONAL TRUCKS as Good as They Look . . . AND THEN SOME!

It's hard to beat International Trucks for sheer good looks—even when you see them beside the newest passenger cars. *But it's what lies underneath* that really makes the profits for International owners.

These popular trucks are built to take all the punishment that heavy farm loads can give them. When you buy International ALL-TRUCK construction you get *a truck*

*built of truck parts to do a truck's work as nearly perfectly as it can be done.*

Get the story about these trucks from the nearest International dealer or Company-owned branch house.

**INTERNATIONAL HARVESTER COMPANY**  
(Incorporated)

180 North Michigan Avenue

Chicago, Illinois

# INTERNATIONAL TRUCKS



# APPLE ADVERTISING EAST AND WEST

APPALACHIAN MARKETING LEADER  
SAYS, "WE MUST TELL IN  
ORDER TO SELL"

By CARROLL R. MILLER  
Appalachian Apples, Inc.



**W**HAT is this new thing in apple work—this "Advertising" about which so much fuss has been made the past four years? Why do we have to add this expense to the other expenses of apple production? What is it intended to do, and how is it going about to do it?

"Apple advertising" is simply another step in apple selling. Apple

consumption has gone into a tail-spin! The U.S.D.A.'s most conservative figures show a 16 per cent decline in per capita use of fresh apples the past 15 years. It has been evident for some years, from this and other factors, that the old methods of apple selling were not enough that something else had to be done.

Why has apple consumption declined so heavily? The main cause, far and away, has been straight, plain competition, coming from three main channels: the huge increase in other fresh fruits and vegetables; better and better canned fruits, vegetables and foods, including that marvelous youngster, "quick-freeze" foods; and the improvement in both the preparation and merchandising of processed foods in general.

There are, in a broad sense, two proven ways of increasing sales. We can either drive the public into the stores demanding apples, or we can drive apples onto the public through the grocers. The first of these methods  
(Continued on page 24)

No small part of program at American Pomological Society's joint meeting with the Tennessee society dealt with apple advertising and selling. Most interest-compelling of talks on this portion of program were by Carroll R. Miller and Major C. E. Chase. These important talks are digested in the two articles starting on this page—EDITOR

WASHINGTON PROMOTION EXPERT  
GIVES FACTS ON CONSUMER  
EDUCATION

By MAJOR C. E. CHASE  
Washington State Apple Advertising Comm.



**C**ONSUMER education covers a great deal of territory. My experience covers only a period of something over 30 years, and I have to confess that I still know very little about it. Unfortunately for the fruit industry, this seems to be the opinion of those who have had the most experience along this line. Probably the only reasons we can offer for our not

having the right answer are the constantly changing methods in sales and distribution, the changing desires of the consumer, and the ever-increasing variety of fruit available for consumption.

Not so many years ago, the number of fruits and vegetables to choose from was considerably smaller and it became necessary for a wholesaler or retailer, if he was to have a profitable season, to stock heavily of fruits and vegetables during their seasons. This is changed now to where almost any item of fruit, or several items for that matter, can be almost entirely dropped and the retailer substitute other items which, because of research and advertising, claim to have, in abundance, all the health and food values of the product he is not stocking.

In view of this condition, I think it is apparent to everyone connected with the fruit industry that the answer is to bring about a demand that will force the retailer to handle the fruits in which we are interested.

(Continued on page 25)

Helping the grocer to sell and thus moving fruit for growers is motive back of this attractive window display as set up by Appalachian Apples, Inc. In this particular window arrangement, four types of display pieces are used.

Here's one way that representatives of Washington State Apples reach the consumer. Fruit is the "main attraction" in this retail outlet window display, but there are also large apple posters and easy-to-read price cards.



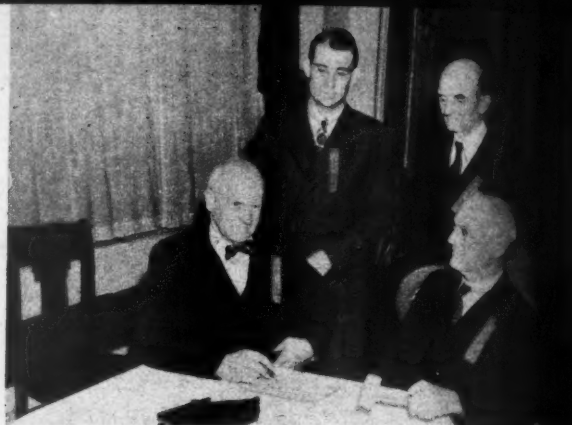
# LIGHTS! CAMERA! ACTION!

## AT JOINT A P S-TENNESSEE MEETING IN CHATTANOOGA

Below—An Arkansas fruit grower, John E. Roberts, left, helps A. N. Pratt, Tennessee horticulturist, set up the fruit display, a feature of the meeting.

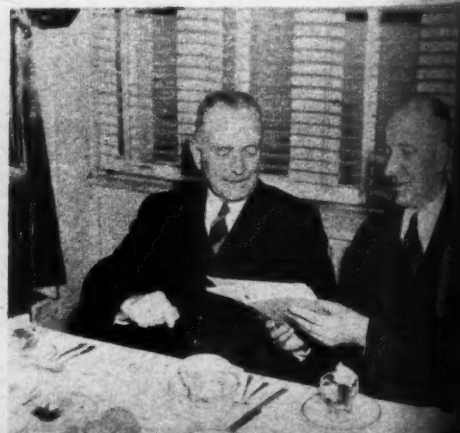
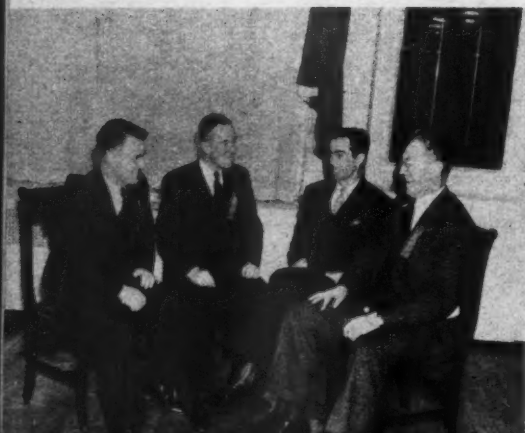
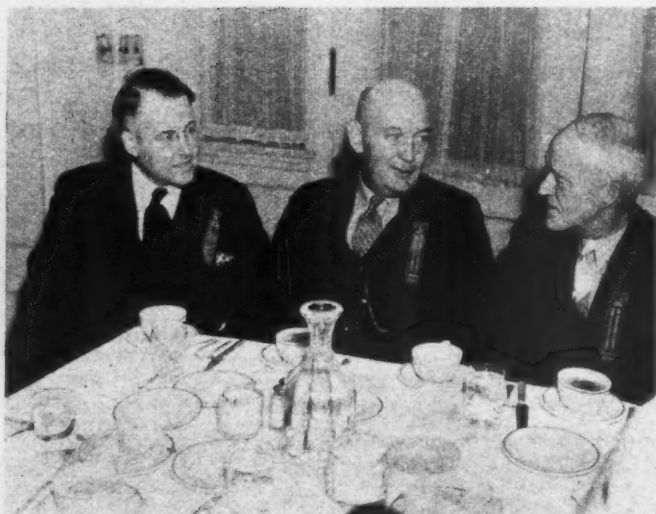


Circle—Harmony at the banquet was supplied by W. G. Admonds, left, W. W. Magill, center, and John Hughes. Below—Growers, left to right, busy talking at one of the APS luncheons are Robert Clark, Iowa; J. B. Bonham, Tennessee-Virginia; J. H. Boyd, Michigan.



Above, top—1938 Tennessee society president J. H. Beyer gavel, talks with growers S. N. Varnell, seated, J. C. List, standing, left, and J. E. List. Above—Alfred Swann, Tennessee's 1939 president, visits Chickamauga Dam with J. E. List. Below—Canada's representative at the meeting, Buchanan, chats with Glenn Mather from Illinois. Buchanan elected APS international relationships vice-president.

Below—A happy quartet in the meeting hall corner is made up, from left to right, of L. E. Scott, South Carolina; Dr. O. I. Snapp, Georgia; T. E. Ashley, Mississippi, and D. E. Hedges, Tennessee. Below, center—Georgia's Dr. T. H. McHatton, right, has an apt listener in Iowa society secretary, R. S. Herrick. Below, right—Missourian T. J. Talbert, left, AMERICAN FRUIT GROWER contributing editor, compares meeting notes with Dr. A. A. Nikitin of Tennessee.



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# NEW USES FOR FRUIT

By Dr. H. E. BARNARD

Director of Research  
National Farm Chemurgic Council

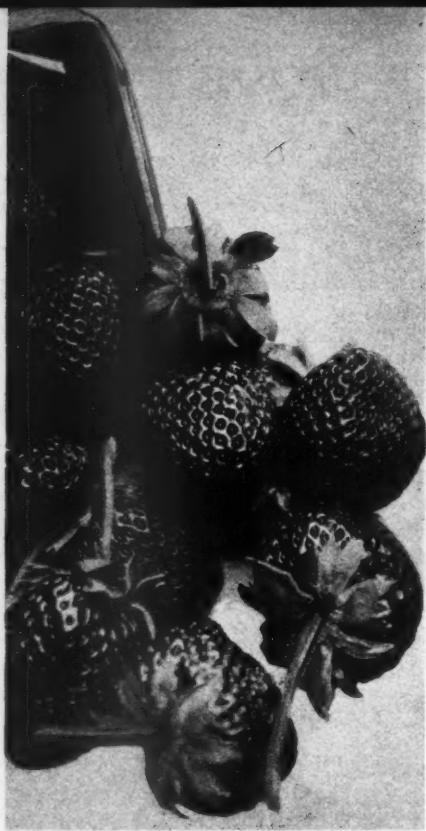
To date, most popular of the fruits used in the frozen food industry is the strawberry. In the photograph on the left berries of select quality on the white belt discharge into an elevator, which in turn discharges into the quick freezing machine. The berries on the darker belt seen in the picture are destined to be sliced and cold packed for the ice cream and pie trade.

Photograph below shows the packaging of the frozen strawberries. Paraffined paper cartons are lined with watertight Cellophane bags and the frozen berries are weighed in by the operator. Photos by TVA.

IN the last few years the recognition of the importance of finding uses for fruit which is not suitable in grade and quality for the commercial market has made remarkable progress. Fruit growers are familiar with the efforts of the National Apple Institute to develop a research program. They have discussed the subject at their annual meetings, and they have watched with much interest the developing program of the regional research laboratories which will shortly be established in the four major sections of the country. They know that the eastern laboratory lists a study of apples as the first of its five major projects. The tentative research program for this laboratory in outlining its study of apples lists as its objective the development of new, and the improvement of old, industrial uses for apples and apple products. A second major objective relates to fruits and vegetables which will be studied in a similar way. Berries, cherries, grapes, peaches, and other fruits are included in this proposed research program. In the study of apples, special attention will be given to the preparation of juices and dried pulp. A special study will be made of the preparation of alcoholic beverages, higher alcohols, and organic acids from apples and apple products. The

(Continued on page 21)





## BERRIES •

### FAVORS AROMA

Around Pekin, Ind., where strawberry growing is an art, H. C. Littell, called "Happy" by co-workers, is well-known as manager of the Borden-Pekin Fruit Growers' Association. He will tell you that until a few years ago it made little difference what varieties of strawberries were grown in his part of the country. Not so today, for berries, because of better transportation facilities and an altered consumer demand that persists much longer in season than previously, are shipped as far as 3000 miles distant from our Hoosier friend's locality.

When Littell took over management of this growers' group, prices received for fruit caused greatest concern, with varieties receiving little attention. Other things being equal, buyers would offer just as much money for one variety as another. Now they prefer Aromas.

Preference for the Aroma lies mainly in its superior shipping qualities. When a carload of Aromas was shipped from Pekin to Saskatchewan, Canada, a distance of more than 2800 miles, the Canadian buyer reported, "Retained color well; very firm; looked beautiful." Littell is really "sold" on this variety, as indicated by his remarks.

"Unlike its chief competitor, Premier, the Aroma holds up in size during the entire season. Instead of a few good pickings and the rest just mediocre, the Aroma retains its size and yield throughout the entire sea-

While the Fairfax, shown at left, is an excellent market berry and a heavy bearer, H. C. Littell does not recommend it for shipping.

At right is illustrated the Taylor red raspberry, one of three new types recently introduced by G. L. Slate at the New York station.

son. Government inspection at our packing plant shows that there is a higher percentage of No. 1 berries than any of the other varieties."

Dorsett, claims Littell, is a good local market berry, while Fairfax is a heavy bearer and also a local market type. Blakemore is frowned on because of plant disease susceptibility. Premier is Aroma's competitor, but, like other types mentioned here, it does not ship well.

### THREE NEW REDS

Stepping ahead with their raspberry breeding work which has been in progress at the New York Experiment Station for upwards of 10 years, G. L. Slate and his fellow researchers have named and are introducing three new red raspberries.

"The introduction of the Lloyd George red raspberry from England and its use as a parent in breeding work is a landmark in the improvement of this fruit," comments Slate on the background for his breeding tests. He adds, "A notable series of very promising seedlings has recently been developed from crosses between Lloyd George and other varieties, especially Newman and Newburgh." Indian Summer, Marcy, and Taylor, the new introductions, are Lloyd George seedlings.

Indian Summer, actually by accident, turned out to be the best "ever-bearing" or autumn-fruiting red raspberry at the New York station. It originated from a cross between Lloyd George and one of the station seedlings, neither of which fruits in the fall at Geneva, where the station is located.

Marcy and Taylor resulted from crosses between Lloyd George and Newman. Marcy is the largest red raspberry to fruit at the New York station. Taylor has performed so well that it is now being commercially recommended.

About a Minnesota introduction, the Red Lake currant, Mr. Slate has this to say: "The characteristics which make this variety worthy of notice are the long, well-filled clusters of large berries that are fully equal to those of Perfection, and the bushes are much superior to those of the latter variety. The berries are a light, glossy red in color, the flavor is pleasantly acid, and they have excellent quality." Slate is author of a recently revised circular issued by the station which is entitled, "Red Currants and Gooseberries." It includes cultural and pest control facts.



## CITRUS •

### MARKET BOOSTERS

Bucking a record crop, citrus leaders were a fortnight ago busy with plans to move their fruit. At a conference in Washington, called by the U.S.D.A., they tried to ferret out a workable solution to the problem. At the conference, they had the help of representatives of retailers, shippers, wholesalers. Main demands of the industry centered on lowering of packing costs, terminal market charges and carrier rates. They also maintained that mark-ups should be limited to 23 per cent above costs.

For sales aid, bigwigs of citrus growing and marketing suggested that committees be appointed to find markets with low citrus consumption. They urged retailers to hasten a coordinated sales program. Hoped for is the unification of effort in the face of the large crop, that growers will forget sectional prejudices.

California Fruit Growers' Exchange president, C. C. Teague, went on record as being in favor of the one step that he maintains will bring order to the marketing of so large a crop—establishment of oranges under Federal prorate act. At the same time, he proposed that lemons be placed under state prorate.

Meantime in Florida, B. H. Schoepf, best known as head of Tamiami Trail Tours, Inc., a passenger and freight transportation service, has launched a state-wide campaign for increased citrus usage. Striking out on every retail marketing

(Continued on page 28)



# Black Leaf

## Aphis Control IN 1939

For a quarter of a century... and more...  
"Black Leaf 40" Aphis control has been the  
standard. Orchardists know its dependable control  
of Green and Rosy Aphis, Bud-Moth, Red-Bug,  
Leafhopper, and Codling Moth... Wise growers  
choose "Black Leaf 40". It stands the test of time.

Include this versatile insecticide in your standard  
spray... saving expense of extra application. Of  
vegetable origin, "Black Leaf 40" is not harmful to  
buds or foliage. It also serves the gardener, poultry-  
man and sheepman... effectively and economically.

**Sold by Spray Material Dealers Everywhere!**  
**TOBACCO BY-PRODUCTS & CHEMICAL CORPORATION**  
Incorporated • Louisville, Kentucky

3920

FOR 30 YEARS  
"BLACK  
LEAF 40"  
HAS BEEN THE  
FARMER'S  
FRIEND!



# APS

A PAGE CONDUCTED IN THE  
INTERESTS OF THE AMERICAN  
POMOLOGICAL SOCIETY

## 20 STATES LEND INTEREST TO ANNUAL MEETING

**U**PWARDS of 20 states were represented at the American Pomological Society annual convention held at Chattanooga, Tenn., November 30, December 1 and 2. The Tennessee State Horticultural Society lived up to its reputation for true southern hospitality, and interest ran high throughout the entire program. The general success of the meeting was due to the excellent co-operation of those who arranged the program and to those who participated in the arrangements for the local entertainment of the two societies. Nothing was left undone to make the meetings most enjoyable from every standpoint. To President J. H. Bayer and Secretary G. M. Bentley of the Tennessee State Horticultural Society special thanks are due. The local committee in charge of arrangements at Chattanooga consisted of Messrs. Hedges, Shier, and McCurdy. The Ladies' Auxiliary of the Tennessee State Horticultural Society assisted greatly in providing entertainment for the visiting ladies.

### Officers Elected for 1939

The following were elected to office for 1939:

President—B. S. Pickett, Ames, Iowa.  
Secretary—H. L. Lantz, Ames, Iowa.  
Associate-Secretary—John T. Bregger, Drexel Hill, Pa.

Treasurer—H. C. C. Miles, Milford, Conn.

Vice-presidents in charge of:

National Apple Institute program—Kirk L. Keller, Creve Coeur, Mo.

International relationships—John Buchanan, Berwick, Nova Scotia.

Public relationships—C. E. Chase, Wethersfield, Wash.

Allied industries relationships—T. J. Talbert, Columbia, Mo.

State horticultural society relationships—G. L. Smith, Rock Island, Ill.

Spray residue research—W. A. Ruth, Urbana, Ill.

New horticultural variety lists—F. P. Cullinan, Washington, D. C.

Nomenclature—M. J. Dorsey, Urbana, Ill.

### Resolutions

The papers and discussions presented at the meetings will be published in full in the Proceedings of the American Pomological Society. A most important contribution of immediate interest is the set of resolutions which was drawn up by the Committee on Resolutions and passed upon by the society. The secretary was instructed to forward a copy of these resolutions to the various state horticultural societies and to urge upon them a thorough-going discussion of Resolution 8 and that a vote of the society be called for and the result

forwarded to the secretary, H. L. Lantz, Ames, Iowa.

The following is a complete set of resolutions as passed by the society:

### Report of Committee on Resolutions

The Committee on Resolutions of the American Pomological Society and the Tennessee State Horticultural Society beg leave to offer the following for adoption:

1. That we express our thanks and appreciation to the various commercial and civic, State and national agencies, with special reference to the Chattanooga Chamber of Commerce, the Patten Hotel, and Radio Station WDOH, and the Chattanooga newspapers, who have given their hearty co-operation in arranging and carrying out the joint program of the 54th Convention of the American Pomological Society and the annual meeting of the Tennessee State Horticultural Society, and for the splendid co-operation and the fine hospitality enjoyed during the course of these meetings.

### 2. Resolved:

That the American Pomological Society accept and deeply appreciate the reports and excellent work of Dr. W. A. Ruth and Dr. S. Marcovitch in presenting the facts on the spray residue situation.

We recommend that the APS authorize



APS president B. S. Pickett, right, receives congratulations on his re-election from G. M. Bentley, who was reappointed secretary of the Tennessee society at Chattanooga meeting.

AMERICAN FRUIT GROWER

the Spray Residue Committee of the APS to take such action as they deem advisable and best on future questions in connection with the spray residue problem.

### 3. Resolved:

That the American Pomological Society urge all state horticultural societies and interested individuals to write Secretary of Agriculture Wallace expressing appreciation of the raised tolerances of lead and fluorine that have recently been granted. We understand that the investigations of the United States Public Health Service have made this possible and urge that the spray residue research be continued.

### 4. Resolved:

That the Superintendent of National Capitol Parks, Washington, D. C., be requested to adequately preserve the A. J. Downing Memorial Monument erected by the American Pomological Society many years ago.

### 5. Resolved:

That we heartily indorse the work and accomplishments of the National Apple Institute in its efforts to unify the various state and regional apple institutes established for the purpose of promoting wider uses of fruits in both domestic and foreign markets.

### 6. Resolved:

That the Executive Committee of the society be urged to formulate and develop plans that will make it possible for the society to be of greater service to the affiliated societies and their memberships.

### 7. Resolved:

That we are grateful to President B. S. Pickett for his program contribution of a national plan to improve marketing conditions in the Apple Industry and recommend that his ideas be referred to a marketing committee of the APS for thorough study.

### 8. Whereas:

Low grades of apples are becoming increasingly harmful to profitable marketing of better grades and are a large factor in turning consumers to the use of other fruits and lowering apple consumption, be it resolved that the American Pomological Society urge all state horticultural societies in meetings of the coming year to consider and take a vote on the question of Federal legislation to keep apple culls out of interstate commerce except where definitely consigned to by-product plants and to send the results of these ballots to the secretary of the American Pomological Society.

### 9. Resolved:

That the authorities in charge of the Federal Wage and Hour Law be urged to interpret the regulation affecting the Orchard Industry in such a way that the fruit grower be not further handicapped and forced to greater expense.

Furthermore, we strongly urge that any suggested state wage and hour law be at least as liberal and considerate of the fruit growers' interest as the Federal Wage and Hour Law.

### 10. Resolved:

That the authorities of the various states be urged to do everything possible to encourage the free flow of agricultural products between the states and that no state regulations be promulgated that will tend to erect so-called trade barriers or state tariffs.

### 11. Resolved:

That we request the president of the society to appoint a committee to study the Constitution and by-laws of the society with a view of recommending at the next annual meeting such changes as may appear helpful in coping with present day problems.—Respectfully submitted: T. J. Talbert, chairman, C. E. Chase, Brooks Drain, R. M. Clark; Chattanooga, Tenn., December 3, 1938.

*H. L. Lantz*  
SECRETARY

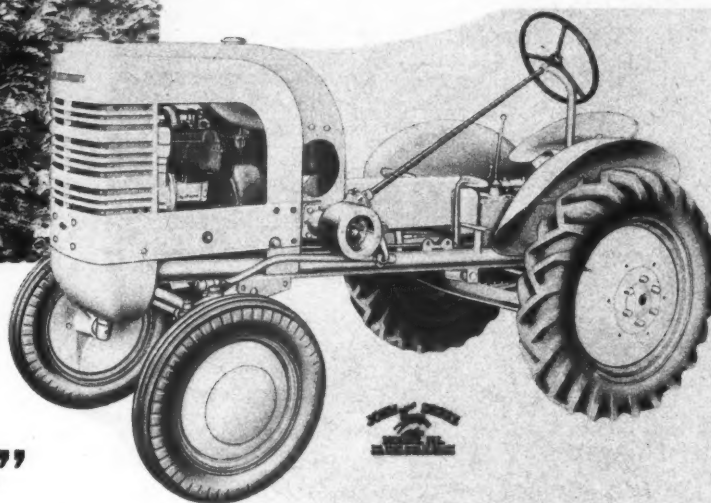
JANUARY, 1939



# See It Now! THIS NEW LOW-COST JOHN DEERE FOR ALL-AROUND WORK *in* BERRIES, GRAPES, ORCHARDS



*Built to Handle All  
Jobs Ordinarily Done  
with a Team of Horses*

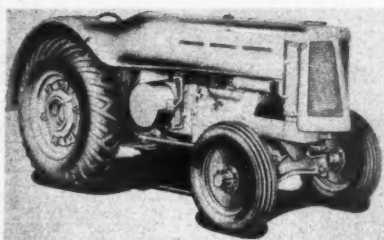


## The New, Improved JOHN DEERE Model "L"

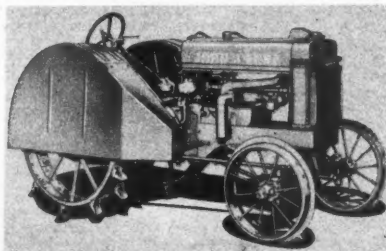
**W**HATEVER crops you grow—regardless of how small your acreage—it will pay you to investigate, thoroughly, the new John Deere Model "L" Tractor and its full line of cost-reducing working equipment. On hundreds of small specialized farms—in all sections of the country—this short-turning, easy-handling, economical little tractor is proving its ability to get the work done faster, and at much lower costs than by former methods.

Now—at a price you can afford—you can purchase this quality-built general-purpose tractor that brings you all of the time-proved advantages of John Deere simplicity, economy, accessibility, and long life. With its adjustable rear wheel spacing and its narrow, compact design, it is perfectly suited to all types of work between berry and grape rows and to close work in orchards, including pulling a sprayer. Individual foot brakes control each rear wheel independently, making possible extremely short turns at the row ends.

## FOR HEAVIER ORCHARD *and* GROVE WORK



The carefully shielded and guarded John Deere Model "AO" Tractor is a favorite with owners of orchards and groves. It's built low and narrow to protect low-trimmed trees, turns short, and gives maximum economy on all orchard work. Power to pull two 16-inch plow bottoms.



This small, compact, shielded tractor—the John Deere Model "BO"—pulls two 14-inch bottoms in most soils, and handles all other work requiring similar power. The Model "BO" is shown here with citrus fenders which are furnished as extra equipment.

Powerful for its size, the Model "L" pulls its special 12-inch integral plow, 7 inches deep, at a speed of 3-3/4 M.P.H. under average conditions. Owners report fuel consumption of 4 to 7 gallons in a full 10-hour day's work, depending upon type of work. Only 2-cylinder engine design can make such economy possible. Entire tractor weighs less than 1600 pounds. Easy to adjust. Easy to understand. Drives just like your automobile, with foot clutch and standard gear shift.

For full information, see your nearest John Deere dealer. Mail coupon for free literature.

# JOHN DEERE *Two-Cylinder* TRACTORS

JOHN DEERE, Moline, Ill. Dept. LO-42

Please send the FREE FOLDERS which I have checked.

- ☐ Model "L" Tractor and Equipment.
- ☐ Model "AO" Orchard Tractor.
- ☐ Model "BO" Orchard Tractor.

Name .....

Town .....

State..... R.F.D.....

# STATE NEWS

**FLORIDA**—The best way to find out why people eat citrus fruit—and how—is to ask them. That is exactly what has been done by the Florida Citrus Commission in a survey conducted by its advertising agency in eastern and midwestern market areas. Six hundred housewives were interviewed, the canvasser picking an ordinary street in typical communities.

Tabulation of survey replies revealed that 94 per cent of the women interviewed bought oranges for juice purposes. Of this 94 per cent, seven out of 10 stated they served the juice daily or oftener, as compared with 1.7 per cent who said they used oranges for salad daily or oftener, 7.4 per cent peeled, and 7.3 per cent halved.

Nine out of 10 housewives, it was learned, buy oranges because they think they are healthful. Of the women interviewed, 20 per cent said they served oranges for their vitamin content and as a supplementary source of sunshine.

Facts revealed by the survey are being used as a guide in the preparation of copy for the commission's advertising campaign.

**UTAH**—Previous to the State convention in Salt Lake City on January 21, a series of meetings, sponsored by the State Horticultural Society, will be held in leading fruit growing counties.

Purpose of these meetings is to afford growers an opportunity to discuss marketing and other problems. Needed State legislative programs are to be formulated that will assist in profitable disposal of Utah fruits.

County presidents of the society will preside as follows: Dr. N. C. Spaulding in Utah County, George B. Andrus in Salt Lake County, L. C. Smith in Davis County, Judge J. A. Howell in Weber County, and Milton J. Thorne in Box Elder County.

From the county reports, a State legislative and marketing committee will draw up the legislative program for the society and present a report at the annual convention.—A. STARK, Sec'y, Logan.

**TEXAS**—During the next few months approximately a million consumers throughout the United States and Canada are going to receive a post card, on one side of which they will see an attractive tropical scene of citrus and palm trees, while the message on the reverse side will tell the merits of Texas citrus.



Through this publicity stunt, Ralph Killingstad, manager of the Shippers Precooling Service of Brownsville, hopes to materially increase the sale of Texas citrus. Chambers of Commerce in the citrus belt are co-operating with Killingstad in his efforts.

**NORTH DAKOTA**—Anyone who has had the opportunity to taste fruits of the Oka cherry will want to set out a few bushes for trial. This sandcherry hybrid bore a heavy crop of fruit in 1938 at the Northern Great Plains Field Station at Mandan. Growers of this section may not find this variety as hardy as Opata or Compass, but they will agree that the fruit has higher quality.

Despite the fact that western North Dakota has been experiencing several years of dry weather, H. C. Blankenship's mulberries at

National Apple Institute has accepted the invitation of the Illinois State Horticultural Society to hold its mid-winter meeting at Carbondale, Ill., when a joint program will be presented on January 5-6.

Important feature of the institute program will be a full consideration of the LAWS in FORCE in Washington, Idaho, and other states by which ADEQUATE funds are secured for supporting educational, advertising, and sales efforts to increase apple consumption.

The subject will be presented by Major C. E. Chase, secretary-manager of Washington State Apple Advertising Commission, and discussed by commissioners of agriculture and markets of states in which the laws are in successful operation and where legislation will be proposed for enactment at the 1939 legislative sessions.

This important subject is now actively commanding fruit growers' attention throughout the country, and the decisions reached at the coming meeting will influence legislation and direct the progress of National Apple Institute, regional institutes, and the state horticultural societies for years to come.

I urge you to make every effort to attend this most important meeting.—KIRK L. KELLER, Pres., National Apple Institute.

Williston bore fruit in 1938. This is the first record we have of mulberries fruiting in the State.—HARRY A. GRAVES, Sec'y, Fargo.

**MASSACHUSETTS**—Topics for the Fruit Growers' Association meeting in Worcester, January 4-6, to be held as part of the Union Agricultural meetings, will range all the way from hurricane damage to apples and their nutritive value. A nutritional program will be given on the 6th by Dr. Ira A. Manville of Portland, Ore., nationally known nutrition research expert.—W. R. COLE, Sec'y, Amherst.

**INDIANA**—An impressive list of speakers, including prominent Hoosier fruit growers and workers from the university and the Indiana branch of the U.S.D.A., and several out-of-State notables will appear on the program of the 78th annual Indiana Horticultural Society meeting at Purdue, January 10-12.

Out-of-State speakers included P. R. Taylor, chief, general crops section, Bureau of Agricultural Economics, who will talk on the fruit industry and the cull apple problem. W. J. Welday, owner of the Red Ridge Orchard in Ohio, will discuss his apple rootstock and topworking experiences.

E. J. Heuser of the Hilltop Orchards in Michigan will tell about his packing and marketing methods for which he is justly renowned. G. S. Carpenter, manager of the extensive American Fruit Growers, Inc., orchards, will cover the subject of orchard management and marketing and sprays for aphid control.

Indiana fruit growers especially can ill afford to miss a meeting which offers so complete a discussion of their problems, and horticulturists from surrounding states are

more than welcome.—R. L. WINKLEPLECK, Sec'y, Lafayette.

**NEW YORK**—George A. Morse of William-son, 1937 State Horticultural Society president, has remarked, "We are living in changing times and those of us who cannot adapt ourselves to the changing conditions will be brushed aside. Nothing succeeds like success, and group merchandising as being accomplished by both chains and independents has come to stay, at least until we can find something better. The sooner we realize the change is permanent and begin co-operating, the quicker we will make the transition."

"If I can see anything looming up out of the indistinct future, it is a growing demand for larger and larger quantities of uniformly graded packed fruit, supplies of which can be guaranteed throughout the season. I believe we may have to come back to central packing, but not necessarily central sales agent. We tried this in other days, but we were ahead of the times. I believe the time has now arrived when it can become successful."—H. B. TUKEY, Geneva.

**MINNESOTA**—Popularity of the Annual Farm and Home Week at University Farm, St. Paul, is indicated by last year's registration of 3483. Even greater attendance is expected January 16-20 during this year's event. Among the many programs offered will be sections devoted to fruit and vegetable growing and ornamental horticulture. This is one of the short courses on the university program of study. Registration is free.—J. T. WINTER, Sec'y, Mound.

**KANSAS**—When a college walks off with top honors in the Intercollegiate Apple Judging Contest four times in succession, congratulations and publicity are in order for both students and coaches.

In the contest held recently at Kansas State College, Manhattan, the team from the home State ranked first, Missouri University second, Oklahoma A. & M. third, and Texas Tech fourth.

Members of the Kansas team: Herman Reitz, Belle Plaine; Melvin Peterson, Riley; Emil Kientz and Dale Johnson, Manhattan, with Reitz placing first. Coach of the first-place winners was Dr. George A. Filing, Manhattan. In the three previous contests



Dr. W. F. Pickett, Manhattan, coached the teams.—G. W. KINKEAD, Sec'y, Topeka.

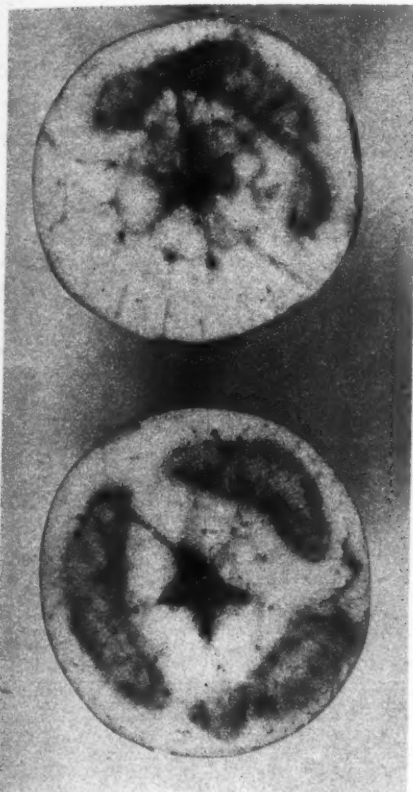
**CALIFORNIA**—The California-Arizona citrus industry marketed 107,330 cars of oranges, lemons, and grapefruit for consumption at fresh fruit during the 1937-38 season, ended October 31, according to the annual report of Paul S. Armstrong, general manager of California Fruit Growers Exchange. Shipments through the exchange equaled 71,702 cars.

Average cost for the exchange marketing service, excepting advertising, amounted to five cents per packed box. Investment in advertising was 10 cents per box on lemons and three cents on grapefruit. Orange advertising was upped from five to seven cents per box to develop maximum consumption for the big crop.



# STORING APPLES for a QUALITY MARKET

By CLARENCE E. BAKER  
Purdue University  
Agricultural Experiment Station



**T**HE aim of every apple grower is to offer for sale to prospective buyers a high quality product of which he may be proud. With this idea in mind he fertilizes, prunes, and sprays his trees and does everything possible to give them ideal cultural conditions. Under usual conditions, however, the crop is seldom marketed immediately after harvest but is often placed in cold storage or an unrefrigerated farm storage and sold several months later. During this storage period the quality of the fruit may change materially from that prevailing at harvest time, and the condition of the fruit at the time of sale is sometimes a surprise and disappointment to the grower. Many times this loss of quality during the storage period could have been prevented by a better understanding on the part of both the grower and the storage operator of the factors that influence keeping quality.

The first essential to high quality upon removal from storage is well grown and properly matured fruit.

If apples are harvested before they are mature, they will not have good storage quality. Immature fruit is likely to shrivel or wilt excessively in storage and fails to color or develop properly at low temperatures. Instead of attaining an attractive yellow ground color and becoming more attractive in flavor, immature fruit is likely to remain green and become insipid. Green fruit, also, is more susceptible to storage scald than fruit properly matured upon the tree. Over-mature fruit, on the other hand, is equally undesirable for storing, as its storage life is shorter, it tends to become dry and lacking in flavor before the end of its normal storage season, and frequently develops mealy breakdown.

Attempting to ripen immature fruit after harvest by holding it at a warm temperature for a period before storing is not a wise practice except in cases where the owner is certain the fruit is to be sold for immediate use in a very short time. Apples intended

(Continued on page 18)

Top, right—Fruit that is russeted is likely to shrivel in cold storage and should not be expected to keep for a long period. These Jonathan apples were severely shriveled in early December when unblemished fruit in the same package was still firm and crisp.

Above—Internal breakdown or soggy breakdown on Grimes as a result of storing at 31 to 33 degrees. This trouble may be prevented by holding susceptible varieties as Grimes and Golden Delicious at 34 to 36 degrees. Delay in storage after harvest is a contributing factor in the cause of this condition.

Right—Mealy breakdown of Grimes apples in cold storage is common when fruit is permitted to become overmature before storing. The flesh becomes dry and crumbly and the apples frequently crack or "explode." Grimes, Delicious, and York are especially susceptible.



# HERE'S A REAL BUSINESS PROPOSITION FINER FINISH • FINER

BY USING

# DRY LIME SULFUR WETTABLE

THE NEW, PROVEN WAY TO MAKE SULFUR WETTABLE

Apples are grown for sale. And when you take your crop to market it's APPEARANCE THAT COUNTS! FINE COLOR and FINE FINISH bring FINE PRICES—and a FINE PROFIT for you. Here, then, is a real business proposition. Do as thousands of other foresighted growers are doing—get FINER FINISH and FINER COLOR and at the same time cut your scab-control spray bill one-third by using the new, PROVEN, effective, safe and economical summer spray for apples—Sherwin-Williams Dry Lime Sulfur with S-W Sulfix Sulfur-WETTABLE.

## Proof from the Field

### "FINE FINISH"

"Used the new DRY LIME SULFUR with SULFIX SULFUR-WETTABLE mixture on our Macs. We have 5000-bushels of Macs in storage. There was not a dozen scabby apples in the lot. Everyone is talking about the beautiful finish on the fruit. Foliage is smooth, green and beautiful, no crimping of leaves."

(Name on Request)

### "EXCELLENT COLOR"

"Used your Dry Lime Sulfur with Sulfix Sulfur-Wetttable combination on my McIntosh, Wagener and Stark apples. I began using this spray in the pink and carried it through to include cover sprays. Foliage on the trees remained perfect throughout the growing season and fruit matured with an excellent color, a very fine, smooth finish, and also was free from scab. I was pleased with the way this combination handled in my new spray rig. I will use this Sherwin-Williams combination next year in my orchard."

(Name on Request)

### "HEALTHY FOLIAGE"

"This past season I used the Sherwin-Williams Dry Lime Sulfur with Sulfix Sulfur-Wetttable combination in my Rome orchard. The combination worked easily in the spray rig and is excellent and economical to use. The apples are well finished, free from scab and of fine color. The trees sprayed this year were free from sulfur burn and the leaves remained green and healthy. I plan to use the combination in my orchard again the coming year."

(Name on Request)

A SCAB-CONTROLLING, NON-RUSSETING,  
NON-INJURIOUS-TO-FOLIAGE SPRAY COMBINATION

—That Spreads and Sticks.

Assure yourself of A-Grade apples by using this proven combination which does away with the use of expensive wettable sulfurs and uses, instead, Dry Lime Sulfur as the wetting agent, which in itself is a most effective fungicide.

You can mix this new, PROVEN Sherwin-Williams combination yourself in your own spray tank—and by doing so you will achieve

these two BETTER BUSINESS results:

1. You will have a scab-controlling, non-russetting, non-injurious-to-foliage combination, which spreads uniformly and adheres tenaciously to fruit and foliage.

2. This S-W combination will cut your apple fungicide bill ONE-THIRD by doing away with the old-fashioned use of EXPENSIVE wettable sulfurs with liquid lime sulfur.

SEE FOR YOURSELF BY SENDING FOR  
**FREE** FOLDER THAT TELLS YOU HOW  
TO MAKE SULFUR WETTABLE

Read, in the column to the left, of the fine results other practical growers have obtained by using this S-W combination. These growers are just a few of the thousands who are saving money by this new way to make sulfur wettable. Because they are GETTING results they want other growers to know of this BETTER and money-saving summer spray. Write for their names and a copy of the FREE folder that will tell you just how to get FINER FINISH and FINER COLOR and cut your spray bill ONE-THIRD.

**THE SHERWIN-WILLIAMS CO.**

Insecticide Department

101 Prospect Ave.

Cleveland, Ohio.

# SHERWIN-WILLIAMS

## SPRAY AND DUST MATERIALS



OSTION FOR YOU

# IR COLOR

AND CUT YOUR  
SCAB-CONTROL  
SPRAY BILL

**1/3**

Modern Sherwin-Williams science now makes it possible for you to save both your apple crop and your pocketbook by using this new S-W combination.

## FIGURE THE SAVINGS IN YOUR OWN CASE

You know what it has cost you, per 100 gallons, to use liquid lime sulfur, wettable sulfur combination in past seasons.

Study the 1939 Spraying Schedule shown below which is based upon the use of the new, SHOVEN, Safety-First Summer Spray Combination—Sherwin-Williams DRY LIME SULFUR and SULFIX SULFUR-WETTABLE. Figure quantities which would apply to your fungicide spraying operations. Then compare with what it has cost you in the past. You'll see for yourself that this new Sherwin-Williams combination will cut your scab-control spray bill ONE-THIRD.

Once you grow apples as a business—isn't this a REAL BUSINESS PROPOSITION?

### THE SHERWIN-WILLIAMS CO.

#### DRY LIME SULFUR—SULFIX SULFUR

#### 1939 SPRAYING SCHEDULE

No Scab No Russet No Foliage Injury

Pre-Pink	3 lbs. Dry Lime Sulfur
and	5 lbs. SULFIX Sulfur
Peak	
	2 lbs. Dry Lime Sulfur
	4 lbs. SULFIX Sulfur
Calyx	
	1 lb. Dry Lime Sulfur
Additional	4 lbs. SULFIX Sulfur
Scab Sprays	

#### THESE DILUTIONS ARE PER 100 GALLONS OF WATER

and Dry Lime Sulfur will make wettable up to 4 lbs. of SULFIX Sulfur.  
Add 3 lbs. of Sherwin-Williams Arsenate of Lead to 100 gallons of spray when necessary. When using Arsenate of Lead add 4 lbs. of hydrated lime to 100 gallons.

REPRODUCED FROM A  
PHOTOGRAPH OF AN  
ILLINOIS-GROWN STARK-  
ING SPRAYED THROUGH-  
OUT THE SEASON WITH  
S-W DRY LIME SULFUR-  
SULFIX SULFUR-WET-  
TABLE COMBINATION



# SHERWIN-WILLIAMS

## SPRAY AND DUST MATERIALS

# HERE'S *Freedom* FOR FAMILY-SIZE FRUIT FARMS TOO



On Rubber  
ONLY  
**\$495.00**  
F.O.B. FACTORY

## 10 ACRES OR 10,000 ACRES... THE MODEL B TRACTOR FITS

Here's a tractor that does *every* job for the fruit grower—where in many cases larger power would be costly and wasteful. The Model B Tractor with Matched Implements gives the small grower equal footing with the big fellow. But regardless of your acreage, it's your chance to be FREE . . . free from the economic handicap of slow animal power or a large tractor too cumbersome for the lighter jobs. The Model B replaces 4 to 6 horses for *half* the operating cost. You plow, cultivate or mow up to 4 miles an hour. The Model B is fast, compact—gets "into the corners"—fits between berry rows. For you and your family, it's the way to better living, better farming, more profit! See your Allis-Chalmers dealer about it—TODAY!

TO BETTER LIVING  
—  
TO BETTER FARMING  
—  
TO MORE PROFIT  
—

**DISCING** The Model B Tractor pulls 5-foot tandem disc at *twice* the speed of horses! Hauls . . . does power take-off and belt work besides! (Below) Pulling a Deep Tillage offset disc on Knott's Berry Farm, Buena Park, Calif.



**PLOWING** Model B pulls one 16-inch moldboard or 2-disc plow up to 4 miles an hour. No. 116 Moldboard plow \$85.50 f.o.b.



**ALLIS-CHALMERS**  
TRACTOR DIVISION—MILWAUKEE, U. S. A.

ALLIS-CHALMERS MANUFACTURING CO.  
Dept. 16, Tractor Division, Milwaukee, U.S.A.

Gentlemen: Please send FREE books on units checked. I farm.....ACRES.



☐ Model B Tractor  
1-plow, air tires,  
\$495 f.o.b. factory

☐ Implements for B

☐ Plows



☐ Orchard Model M



☐ Model RC Tractor  
2-row, air tires,  
\$785 f.o.b. factory

☐ Implements for RC

☐ Tillage Tools

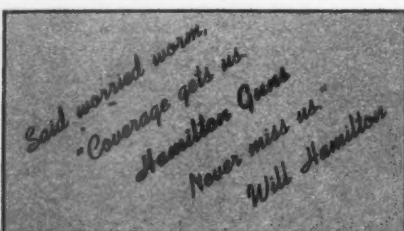


☐ Model WF Tractor  
full 2-plow, air tires,  
\$995 f.o.b. factory

☐ Deep Tillage offset disc

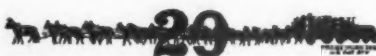
☐ Full-View Safety Mower

Name University of Idaho  
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Spray Guns with Controlled Streamline  
**W. L. HAMILTON & CO.**  
BANGOR - MICHIGAN

**Six Models** • A GUN FOR EVERY PURPOSE  
Send For Catalog



## BORAX—BORIC ACID

Borax or Boric Acid—for the effective control of BORON DEFICIENCY DISORDERS in apple orchards.

WRITE US FOR PRICES  
AND INFORMATION

**PACIFIC COAST BORAX CO.**

51 Madison Ave. New York City

## STORAGE QUALITY

(Continued from page 15)

for a long or an indefinite storage period should be stored as quickly as possible after harvest. Delayed storage encourages the development of many storage disorders, such as storage scald, soft scald, Jonathan spot, mealy breakdown, and soggy breakdown.

Medium sized fruit is likely to have the best storage quality. The smallest fruit from the crop of any variety usually is the green immature fruit from weak trees or inner parts of other trees and will seldom develop high quality in storage. Oversized fruit for the variety is likely to be the first to show mealiness or loss of flavor.

Apples having bruises, skin punctures, or other injuries to the skin are likely to rot in storage, as these skin injuries permit the entrance of disease spores into the flesh of the fruit where they can germinate and grow.

The temperature at which apples are held in storage determines to a large measure the length of time they may be kept in a firm, palatable and attractive condition. In general, apples that are to be held in storage from fall to late winter or early spring must be cooled as rapidly as possible and held at 31 or 32 degrees. Investigations by the U.S.D.A. have shown that apples soften twice as rapidly at 40 degrees as at 32 degrees; about twice as rapidly at 50 degrees as at 40 degrees, and twice as fast at 70 degrees as at 50 degrees. These temperature relations show the impossibility of holding many varieties of apples for long periods in ventilated farm storages where satisfactory temperatures are difficult to secure.

In the case of several varieties of apples, however, an exception must be made as to the temperature requirements. Grimes, Jonathan, and Golden Delicious at least prefer a higher temperature range and should be stored at 34 to 36 degrees. Grimes and Golden Delicious are likely to develop an internal breakdown of a soggy nature when stored at 31 to 33 degrees, and Jonathan frequently shows soft scald. Wealthy, Rome, and Winter Banana, also, frequently develop soft scald at a low temperature. The Iowa Experiment Station presents evidence that soft scald and soggy breakdown are different manifestations of the same disease. This condition is purely physiological in nature, that is, it is not produced by any external organism as fungi, insects, or bacteria, and it may be prevented by storing susceptible varieties at 34 to 36 degrees.

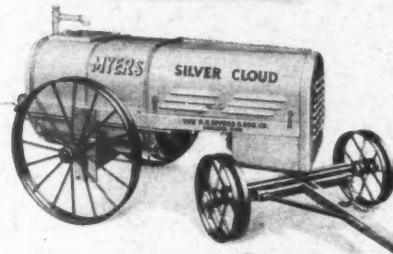
One grower's experience in 1937-38 is typical of what often happens in handling Jonathan. The Jonathan crop of one orchard was divided after packing. About half of the fruit was stored at 31 to 33 degrees in a commercial cold storage at a city market. The remainder was held by the grower in his privately owned cold storage at 36 to 38 degrees. The apples were sold in January, those in the city storage being moved first. Upon examination it was discovered that they had developed soft scald, and it was necessary to reduce the price to hold the sale. The fruit in the private storage was free from soft scald or Jonathan spot and in good, firm condition. This fruit was sold to the same buyer for more than double the price received for the soft scalded fruit.

Storage scald (which is different from soft scald) becomes more severe at higher temperatures but is likely to appear at any range on susceptible varieties. Grimes, also, is very susceptible to storage scald and when stored for more than a few weeks should be protected from this condition by packing in shredded oiled paper at the rate of one-half pound per basket, thoroughly distributed through the pack. Other susceptible varieties are Stayman, Winesap,  
(Continued on page 20)



# Stream-lined

# INSIDE and OUT!



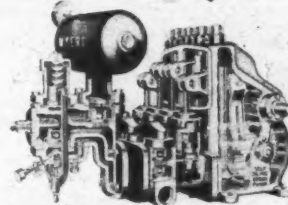
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and tractor operated sprayers . . . hand operated bucket, barrel, knapsack and compressed air sprayers. MYERS Spray Catalog contains complete illustrated descriptions and is a veritable textbook of spraying information. Send today for your free copy and be sure to designate whether you are interested in power sprayers or hand sprayers. Remember also that there's a MYERS dealer near you, ready to supply your needs and assure prompt service in the upkeep of your spraying equipment. Mail the handy coupon TODAY.



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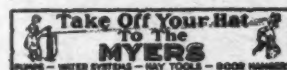
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Levers adjustable. Can be let down, so as not to strike limbs and fruit.

"Every fruit grower, large or small, should have a MARTIN HUMMER" — Gilbert Meister, Vice Pres. American Fruit Grower, who uses Martin in his own orchards. Fastest tool for scientific Row Cultivation, Trenching, Digging, Irrigation, Spray Pipeline, Trenching, Digging, Cleaning Ponds.

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Use a HUMMER 10 days in your own orchard work. Then if you're not satisfied with it, we'll refund every cent.

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PAGE 20

### Standard Garden Tractors

1 & 2 CYLINDERS

Powerful 1 and 2 Cylinder Tractors for Small Farms, Garages, Nurseries, Fruit and Pot. Men.

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With Ample Power for Field, Haying and Truck Crop Tools, Run, Pumps, Saws & Belt Machines.

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AMERICAN FRUIT GROWER

## STORAGE QUALITY

(Continued from page 18)

York, Ben Davis, Rome, Baldwin, Rhode Island Greening, and Wagener.

Optimum moisture or relative humidity conditions are second in importance only to temperature for successful storage. For ideal conditions the relative humidity should be between 85 and 90 per cent. This is a difficult condition to secure at the low temperature range near the freezing point of water and many older type cold storages are unable to hold a satisfactorily high relative humidity. If the relative humidity remains long below 80 per cent, most varieties of apples will shrivel rapidly. Any defect in the skin increases the susceptibility of the fruit to shriveling. Russeted specimens or green, poorly finished fruit often show severe shriveling while well developed fruit of the same variety with no skin blemishes is still in excellent condition. On the same apple, the flesh beneath the green side or under a russeted area often shrivels while the flesh beneath the well colored or uninjured surface is still firm and crisp. Golden Delicious apples, because of their naturally open skin structure with large lenticels, often shrivel in cold storage when held till late winter even where favorable humidity conditions prevail. Wrapping this variety in oiled paper wraps reduces this tendency somewhat. Wrapping the fruit in moisture-proof cellulose sheets permits keeping Golden Delicious well through the following June with no perceptible shriveling and little loss of flavor. Unfortunately, the cost of this protection is still too high to be practical.

Varieties should be removed from storage before the end of their normal season of holding. Many losses occur each year by attempting to hold short season varieties.

Most growers who operate their own refrigerated storage plants follow the practice of storing their fruit immediately after harvest before it is packed. This is the ideal way to handle varieties of apples that are especially subject to storage disorders resulting from delayed storage. The fruit can be graded and packed out of storage as needed, and the purchaser is assured a sound, firm pack, free from deteriorated fruit. The owners of one orchard who follow this practice report that fruit packed out of storage in December and shipped to the Chicago market brought a premium of 15 cents per bushel over fruit of the same variety and grade, packed immediately after harvest, stored in a Chicago commercial storage and sold the same day on the same market. This practice spreads the grading season over a longer period, avoiding some of the fall rush, and makes it possible to build up a more expert and efficient packing crew.

### For EASIER, QUICKER, SAFER, PRUNING



Gardeners everywhere prefer "Snap-Cut" Pruners. The famous patented "V" blade cutting action cuts large, tough branches with amazing ease and smoothness. Does not injure bark. Chrome finish; comfortable non-pinching handles; one hand spring catch.

No. 119 (8' long) cuts 3/4" branches 82.00  
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At dealers or sent prepaid. Money back guaranteed. Free circular. SEND FOR 48 page book illustrating, describing proper pruning. 10c by mail, or FREE with pruner.

**"Snap-Cut" PRUNERS**  
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26 MAIN ST. OAKVILLE, CONNECTICUT, U.S.A.

JANUARY, 1939



## NEW USES FOR FRUIT

(Continued from page 9)

physical and chemical properties of pectin, an important apple ingredient, will be investigated, in the thought that new and improved uses may be found for it.

In organizing its tentative research program, the U.S.D.A. asked many research organizations and the land grant colleges and state experiment stations for help in drafting a sound program. It was not the intent of Congress when it passed the legislation creating the laboratories to study food values, and the entire emphasis of the work of the research laboratories is directed toward the discovery and the development of industrial uses for surplus products. It is probable that research programs, although concerned with industrial uses, may consider the primary use of apples as foods. We shall look to the Eastern Regional Research Laboratory to discover new values in apples which in the long run will open markets for cull fruit which heretofore has had little or no value.

During the last few years, amazing progress has been made in developing practical methods for extracting, preserving, and marketing all types of fruit juices. In a recent release by the U.S.D.A., attention is called to the rapid growth of the fruit juice industry during the past nine years. In 1929 a little more than 1,000,000 cases of fruit juice were packed. Last year 24,000,000 cases were produced.

"America drinks its fruit," according to Gordon Ockey of the Federal bureau, who said that "during the fiscal year 1937-38 the American people probably drank 80,000,000 gallons of canned fruit juices, not including sizable quantities of sweet apple cider, more than 50,000,000 gallons of canned tomato juice, and about 60,000,000 gallons of wine made from grapes produced in this country."

Prior to 1929, grape juice and sweet apple cider were the only unfermented fruit juices consumed in significant quantities. Little tomato juice was then consumed, and commercial production of grapefruit juice, pineapple juice, orange juice, lemon juice, and various fruit nectars was yet to be developed. In contrast, almost 24,000,000 cases of fruit juices were packed last year, and more than 16,000,000 cases of tomato juice. Citrus juices comprised about one-half of last year's high record fruit juice pack, with grapefruit juice making up about three-quarters of the citrus juice pack.

Ockey reports that in the past few years juices made from dried prunes, loganberries, cherries, raspberries, and strawberries, and nectars made from apricots, peaches, pears, and fresh prunes have been produced in increasing quantities.

Increased production of juices is attributed to two factors: increased consumer demand for juice products, and increased supplies of fruit resulting in the necessity of increased diversion of fruit from the fresh market to by-product use.

For several years the Bureau of Chemistry and Soils of the U.S.D.A. has maintained a fruit by-products laboratory at Pullman, Wash. At this laboratory Dr. H. H. Mottern, chemist of the Food Research Division, has achieved considerable success in preparing apple sirups and apple juices.

The principal progress which this laboratory has made in utilizing apple products has been in canning juice using enzyme clarification and flash pasteurization similar to that developed for citrus juices. A method recommended as commercially feasible for canning apple juice has been developed. The American Can Company's grape juice can which has the special enamel developed for wine has

(Continued on page 22)

New TRUCKS

New ENGINES



New DIESELS

New SYNCRO-MESH\*

## More Power for FRUIT GROWERS!

Fruit hauling is less costly with GMC's. New GMC engines are the most efficient truck engines ever built—*delivering more power and using less gasoline!* New GMC cabs are bigger and more comfortable. And GMC introduces 10 new Diesel models for heavy hauling. See GMC first this year. GMC prices are lower—very close to the lowest!

### Packed with Important New Features for 1939

- ALL-NEW VALVE-IN-HEAD ENGINES
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\* Syncro-Mesh Shifting on Heavy-Duty GMC's!—New, easy-shift transmission reduces driver fatigue, especially on hills; saves truck strain, speeds up deliveries, permits more frequent engine braking! Only GMC's have it!

Our own YMAC Time Payment Plan assures you of lowest available rates



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### GRANULAR 'AERO' CYANAMID

In reasonably fertile orchard soils, nitrogen is the only plant food which need be applied for the trees, and for the cover crop.

GRANULAR 'AERO' CYANAMID is a particularly desirable source of nitrogen.

because —

**It is rich.**

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**It sweetens the soil.**

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For further information, and rates of application, write for leaflet F-142.



**AMERICAN CYANAMID COMPANY**  
30 ROCKEFELLER PLAZA NEW YORK, N. Y.

## NEW USES FOR FRUIT

(Continued from page 21)

been found to be the most satisfactory.

A dried apple product called "apple pear," which is essentially a dried apple sauce, has been attracting a good bit of attention in Wenatchee, Wash. It is used by bakeries as a bread improver with the claim that it results in a shorter fermentation period and delayed staling and also aids in preventing ropiness in dough. It is prepared by cooking and sieving apples identical in the manner in which apple sauce is prepared for canning; no sugar is added, however. The cooked sauce is spread on a stainless steel belt which passes through an electrically heated drying tunnel. It is removed from the belt while still warm and pliable and packed into paperboard boxes lined with wax paper.

Pederson and Tressler of the New York Experiment Station found that apple juices prepared from tart or acid eastern apples can be flash-pasteurized and canned at 160 degrees F or higher. Holding pasteurization of 15 to 20 minutes results in the killing of yeast at 155 degrees F or higher. It is unnecessary to kill all microorganisms present in apple juice since the bacteria that survive the above temperatures cannot grow, and the surviving mold spores may be held in check by the absence of air. Pasteurization at temperatures above 175 degrees for one minute imparts a slight cooked flavor to cloudy New York State apple juice.

Canning of a deaerated and flash-pasteurized cloudy apple juice as described by the authors is a simple procedure by which a juice of far more and far better flavor is produced than by any preservation process now employed. It is believed that the method has great commercial possibilities.

Apple cider preserved by several processes, and packaged in glass as well as tin, is now a commercial product. Such work as that reported by Pederson and Tressler is certain, in the course of time, to develop wholly satisfactory ways for placing apple juices before the consuming public in as desirable a form as the other fruit juices.

The possibilities in concentrating apple juice by removing much of the water content are considerable. Dr. Mottern has developed a practical way by which to collect the volatile esters which impart flavor and bouquet, and to return them to the sirup. The product thus made has a fine apple flavor, and there is good reason to believe that it will in due season take its place as a table sirup, beside maple sirup and cane sirup.

Fruit breads are not uncommon. Breads containing figs, prunes, and bananas have been made and marketed as special products with unusual qualities either in the therapeutic field or because of other interesting values. Bread made with apples is now finding an increasing sale in the Northwest. Breads containing apples in the form of apple sauce are not to be classed with fig, date or raisin breads, since the apple content is not obvious either in the taste or physical appearance of the loaf. In making the doughs the water content is reduced by the amount added in the apple sauce. The apple pectin and the apple sugars improve the colloidal condition of the crumb and so delay staling of the loaf. The texture is also improved. One formula using 20 per cent of apple sauce is copyrighted and is used

## FOR FINER FRUIT



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PRUNERS  
LOPPING SHEARS  
THINNING SHEARS

A Pruner for Every Purse and Purpose  
Write for Full Particulars

Famous for  
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Since 1848

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PAYING UP TO \$60.00 IN A WEEK  
National company needs more men at once  
to make regular calls on local routes. No  
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for Gardeners, Suburbanites, Florists,  
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AMERICAN FRUIT GROWER

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year. Berries in 3 months after planting. Lowest prices.  
Also Blackberry 1 year 25 for 50c, 4 Elberta Peach, \$14 ft.  
high \$1.00. Over 100 bargains in our catalog. Big cash  
discount for early orders or will ship express C. O. D. if  
you prefer. Examine stock before you pay. Write today.

Whitten-Ackerman Nursery, Box 56, Bridgman, Mich.

JANUARY, 1939



in making a bread known as "Appeal" bread.

The apple bread will not be available from bakeries until apples are prepared in a form permitting quick and easy use in the bake shop. The product referred to in the letter from Dr. Mottern as a dried apple sauce may meet this need. If, however, an apple powder can be developed which will impart less color to the loaf, it will perhaps better serve the demand of the baker for a standardized material which, when added to the dough batch, has no effect on the color of the loaf.

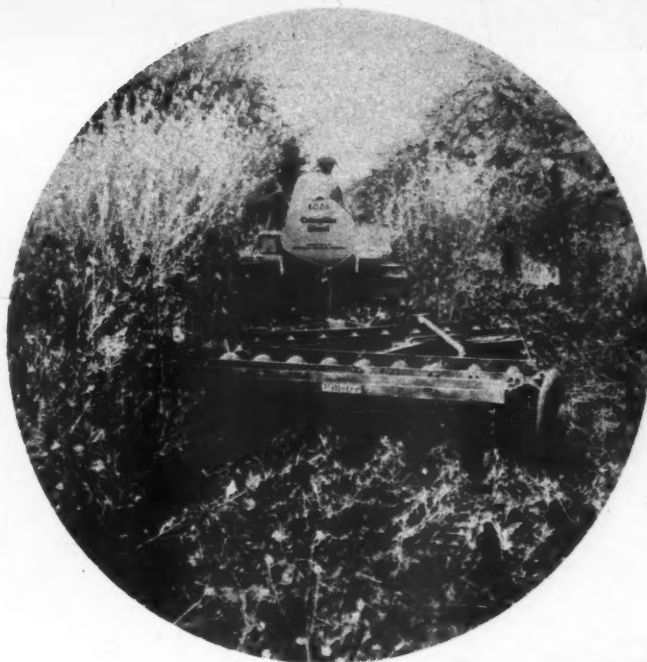
By virtue of its superior natural qualities, fruit has become one of the principal raw materials of the frozen foods industry. In original form, or converted into special products, fruit retains its flavorful attractiveness in the frozen state. Notable work is being carried on by the University of Tennessee engineering experiment station on a new method of freezing fruits, principally strawberries and peaches.

I have mentioned some of the important research studies which are now under way. It should be remembered that time is an essential factor in the development of industrial uses. After results have been reached in the research laboratory, pilot plant operations are necessary to prove their practicability, and after that capital must be shown the economic value of the discovery in order that commercial plants may be built. Until factory operations are profitable, all research programs will be of little value except as they are contributions to the storehouse of knowledge.

#### CALENDAR OF COMING MEETINGS and EXHIBITS

- Jan. 4-5—Maryland State Horticultural Society, Frederick.—A. F. Vierheller, Sec'y, College Park.
- Jan. 4-6—Illinois State Horticultural Society, Carbondale.—J. B. Hale, Sec'y, Kell.
- Jan. 4-6—Massachusetts Fruit Growers Association, in conjunction with Union Agricultural meetings, Worcester.—W. R. Cole, Sec'y, Amherst.
- Jan. 5-6—National Apple Institute, in conjunction with Illinois State Horticultural Society annual meeting, Carbondale, Ill.—Dr. H. E. Barnard, Sec'y, 316 Pennway Bldg., Indianapolis, Ind.
- Jan. 10-12—Indiana Horticultural Society, Purdue University, Lafayette.—R. L. Winklepleck, Sec'y, Lafayette.
- Jan. 10-13—New York State Horticultural Society, Rochester.—Roy P. McPherson, Sec'y, LeRoy.
- Jan. 17-19—Maine Pomological Society, Augusta.—E. L. White, Sec'y, Bowdoinham.
- Jan. 17-19—State Horticultural Association of Pennsylvania, in conjunction with Pennsylvania Farm Show, Harrisburg.—J. U. Ruef, Sec'y, State College.
- Jan. 18—Arkansas State Horticultural Society, Lincoln.—Thomas Rothrock, Sec'y, Springdale, Ark.
- Jan. 25-27—Eastern meeting New York State Horticultural Society, Kingston.—Roy P. McPherson, Sec'y, LeRoy.
- Jan. 30-Feb. 1—Ohio State Horticultural Society, during Farmers' Week, Ohio State University, Columbus.—F. H. Beach, Sec'y, Columbus.
- Feb. 1-2—West Virginia Horticultural Society, Market House, Martinsburg.—Carroll R. Miller, Sec'y, Martinsburg.
- Feb. 16—Rhode Island Fruit Growers Association, Governor Dyer Market, Providence.—E. P. Christopher, Sec'y, Kingston.

JANUARY, 1939



## EVEN IN "TREE-HIGH" COVER CROP YOUR DIESEL D2 HAS THE TRACTION!

No matter how tall and dense your cover crop grows—no matter how juicy and slippery it gets—and never mind if your orchard has soft spots galore when disking time comes.

Your "Caterpillar" Diesel D2 Tractor has sure-gripping traction even under such adverse conditions. That means it has the drawbar power to pull a heavy-duty cover crop disk, angled to do real business—to finish the job without delay.

And the steering of this tractor is not affected even by tall, roppy growths—either from slip-

page or from wrapping. Because the broad tracks keep their positive traction, and the steering mechanism is not exposed.

Also, your Diesel D2 has the economy that makes sense these days—the owner shown here disks 20 acres of cover crop daily, on only 15 gallons of low-cost fuel. Only \$80.00 worth of Diesel fuel does 1,000 hours of work for the average fruit-grower owner!

Now, you can buy a "Caterpillar" Diesel D2 Tractor at a price surprisingly close to a rubber-tired spark-ignition tractor . . . on convenient, helpful terms with only straight simple interest. No financing charges!

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TRACTOR CO. • PEORIA, ILLINOIS  
DIESEL ENGINES TRACK-TYPE TRACTORS TERRACERS

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Gentlemen: I want to consider buying a "Caterpillar" track-type Tractor.

Size of orchard.....Power now used.....

☐ I am interested in having a demonstration.

University of Idaho

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AMERICAN FRUIT GROWER

PAGE 23



**Increase the demand for YOUR fruit by packing it in Bemis Lenonet Bags**

As growers everywhere will tell you, you can easily sell more . . . and make more on apples this year by packing them in Bemis Lenonet Open-Mesh Bags. Here's why: Merchants show a preference for . . . and pay top prices for apples packed in these modern, household-size, "Visible-Content" bags because they greatly increase retail sales.

In addition, Bemis Lenonet Bags cut down spoilage and waste and selling time. And they make mass displays easy to build and maintain, which is what the modern retailer is looking for.

Yet Bemis Lenonet Bags are economical . . . are quickly and easily filled . . . and make even the choicest fruit look better.

**MAKE THIS TEST** Just pack a few Bemis Lenonet Bags and show them to your customers. You'll be surprised how quickly they "go for them." Mail the coupon below today for sample bags, prices and details. No obligation. Make this test now and prove the extra profit-making ability of Bemis Lenonet Bags before your heavy selling season starts.



**Bemis Bro. Bag Co.**  
426 Poplar Street, St. Louis, Mo.

Without obligation send at once samples, prices and full details of the following Bemis Open-Mesh Apple Bags:

Lenonet Apple Bags	5 lb.	10 lb.
Vianet Apple Bags	1/2 bu.	1 bu.

Name \_\_\_\_\_

Post Office \_\_\_\_\_

MOSCOW IDAHO

R.F.D. \_\_\_\_\_ State \_\_\_\_\_

## EASTERN APPLE MARKETING

(Continued from page 7)

is properly called "Advertising," including publicity. The second, "Sales Promotion." If we start out to drive the public into the stores demanding our products, we use direct advertising, and plenty of it. It takes hundreds of thousands of dollars annually to do this, but it can be done and is being done by many great organizations.

There are about 28,000,000 housewives in the United States. Educating 28,000,000 people is a big, expensive job. It is a very necessary job. Once the public knows and understands favorably the merits and uses of apples, a huge, lasting backlog will have been placed on the fire of national apple consumption. Advertising is long-time stuff. It is, in effect, "controlling public opinion."

The second of these two general channels for boosting sales is my particular concern here: pushing our product into the public's hands through the stores. The public buys through its eyes. The grocer has a powerful influence on food purchases.

In our own case, Appalachian Apples has a natural field of some 17 states, embracing about 51,000,000 people. We are majoring in "sales promotion" work with the grocers, wholesale and retail, helping to push apples, through the store, into the hands and delivery packages of the public. In working with grocers, as with any humans, the most effective front on which to attack is profit.

The grocer, like everyone else, gives his best effort to the things that are most profitable to him. We are fortunate in this with apples. Apples are the most profitable of fruits the grocer handles, for three

main reasons: apples are the largest fruit in volume of sales, the spoilage-wastage rate on apples is the lowest among fruits, and the mark-up is about the same as on other comparable fruits. But grocers have not thought of apples in this light before. Apples are only one item in hundreds or thousands in their stores. They can't ferret out for themselves all the favorable facts about each item.

Display materials are a necessary part of this work. These materials afford a favorable introduction to the grocer. You have something to give him. That is always a good start. It is on the face of it a mutually helpful proposal.

The display materials are, or should be, advertising at its best—at the "point of sale" where the customer stands, purse in hand, ready to buy and wondering what to buy. An effective suggestion at that time is more valuable than one at home, when the suggestion cannot be converted into immediate purchase.

We try to get a balanced set that has value as window trim, and also some material for the store interior. Price cards are an essential. Pieces for counter distribution are effective, also, when placed so customers can help themselves. Such material must, of course, be made so attractive that the consumer will involuntarily read it. During the first two years of our promotion we used a four-page rotogravure folder which was mighty well received. This year our counter work so far has consisted of a million reprints of Dr. Ira Manville's splendid article "An Apple A

(Continued on page 26)



## SULPHATE of AMMONIA

### Produces More Marketable Fruit

SULPHATE OF AMMONIA, the world's leading source of fertilizer nitrogen, is the ideal material with which to maintain the orchard growth necessary for high production of first quality fruit.

The quick-acting nitrogen in Sulphate of Ammonia promotes a good set of fruit that holds on the tree. Sulphate of Ammonia is also lasting in effect. The increased tree vigor from a spring application is carried through to autumn, giving more and stronger fruit buds for next year's crop. The rich, dark green foliage

produced by Sulphate of Ammonia is the "manufacturing plant" that produces starches and sugar needed to size the fruit and give it marketable quality.

*Domestic* SULPHATE OF AMMONIA, made in the U. S. A., is economical, due to its moderate cost and its high content of usable nitrogen. It contains 20.5% nitrogen and 23% sulphur. Both elements are soluble and available—both are essential for growing crops. It will pay you to use *Domestic* SULPHATE OF AMMONIA in your orchard.

*This Advertisement Sponsored by U. S. Producers of By-Product Ammonia*



## *Domestic* SULPHATE of AMMONIA



## NORTHWEST APPLE MERCHANDISING

(Continued from page 7)

Changes in methods of retail purchases and merchandising have brought this about and the hopes of fruit growers must more than ever depend on arousing consumer demand from the food, health, or any other angle or standpoint that will justify their demands by the consumer. Methods of educating consumers must include every method that has any possibility of planting in their minds a desire for fruits, which may be apples, pears, peaches, or any of the many excellent fruits that are being produced in abundance in the United States at the present time. The food and health qualities of fruits must be stressed to the fullest extent, and in so doing I am sure that the long-range viewpoint and continued consumer demand depends upon using facts rather than making claims that are not consistent with the fruit.

The question of varieties in season is one that has been stressed a great deal. However, it is not possible now to the extent that it formerly was to assure a consumer of certain varieties in certain seasons and follow it up with other varieties later on. With our cold storage methods this picture has changed.

In the Northwest shippers have for years attempted to move the Jonathan variety early so that other varieties could follow. For 20 years, to my personal knowledge, regardless of the price or how much profit could have been derived from their sales earlier in the season, Jonathans have been in abundance in Chicago and Los Angeles particularly during February and March each year. I believe this will be the case for the next 20 years.

The question of qualities is actually one of condition. We know that when a fruit is in the proper condition it has its best quality. We have not begun to even scratch the surface along this line, to have the success that we must have for proper marketing of our fruits. It is estimated that there are between 500,000 and 600,000 retail outlets in the United States handling fruit and that the yearly change in personnel runs approximately 36 per cent. Those going out of business and new ones taking their place runs into another 25 per cent. It seems an almost impossible task for the fruit industry to educate even a majority of owners and clerks in the proper handling of fruits to insure the consumer receiving them in a condition when their qualities are the best.

Retailers tell me that when a customer comes in and complains about the quality or condition of the fruit he is handling it has more effect on him than anything else and that he immediately does everything possible to learn the proper methods that he should practice to supply the consumer with the desired quality and condition of fruit. If he does not do this, the consumer will very likely switch his business to some other retailer who is more alive and awake to the necessity of purchasing and keeping fruit in proper condition.

We use as many dealer service men in all of the major markets as it is possible for us to afford under our appropriation. We feel that the ultimate answer, and one that will result in far better handling methods on the part of the retailer, is a demand from the consumer.

One of the things that is most gratifying to me and to the fruit industry in the State of Washington, has been the tremendous progress that has been made in bringing together the apple producing areas of the United States on a common ground of co-operation. All are realizing that we have a problem that is common to all of us and of such magnitude that the question of our own particular markets and problems have been almost entirely done away with as far

(Continued on page 27)



## Fertilizer? Railroads need it too!

SOMEWHERE around 200 million dollars are spent each year by American farmers for fertilizer.

That is a lot of money when you look at it in total. But it's mighty well spent, when you consider what would happen to the land without it.

Now railroads are something like farm lands. They need "fertilizer" too. They need to have money put back into them, if they are going to keep on giving the finest transportation service in the world.

Even during the past eight years—which were lean ones for railroads—about 2¾ billion dollars have been "ploughed back" into developing better service and more efficient operations. This is over and above the more than 9½ billions spent during the same period for maintenance of roadway and equipment—all of which has made possible faster, safer and more dependable freight and passenger schedules.

When you look at figures like these, you can see that railroads need more than bare running expenses. Unless they can keep on making improvements, their cost of doing business will go up and their service to farmers and other shippers will go down.

That's why the railroads have worked out a program which calls for such common-sense treatment as this:

*Treat the railroads as a business. Give them reasonable freedom to "price" their only product — transportation service. Give them greater freedom to adjust rates to meet competitive situations, to adjust services to the demands of traffic; and to adjust expenses to the condition of their business. And give them equality of treatment and opportunity — equality with other forms of transportation in matters of regulation, taxation, subsidy and the like.*

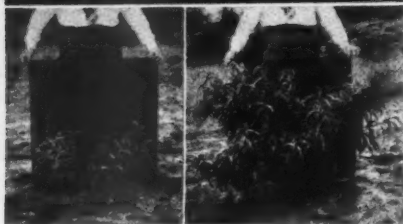
You'll find the whole program interesting. Send for your copy today.

**SAFETY FIRST—**  
*friendliness too!*

ASSOCIATION OF  
**AMERICAN RAILROADS**

WASHINGTON, D. C.

## FRUIT TREES GROW BETTER in Peat-Moss-treated soil!



Without Peat Moss

With Peat Moss

Here's another example of the benefits of planting fruit trees with PIC Emblem-Protected Peat Moss. These peach trees were set out in April 1937. Photos taken June 1938 show marked difference in growth between tree receiving peat moss treatment and other.

Before you plant any more trees, send for a Free copy of our bulletin, "How to Plant and Grow Trees." It tells how a leading pomologist secured 6 times normal growth with apple trees, etc. Write today. Address Dept. AFG-1. Peat Institute of America, Div. Peat Import Corporation, 155 John Street, New York, N.Y.



**NEW**  
*The Apple of Tomorrow!*  
**ROGERS McINTOSH**  
"A Solid Red Mac"

New at regular prices. Better quality than common Mac. Hangs better on tree. Fruits early. Very tender and juicy.

Trees guaranteed hardy, healthy, and true to name. Northern Grown Fruit Trees—Berries—Grapes—Roses—Shrubs and other stock all described in our 1939 Fruit Catalog.

(Trade Mark Reg.) Est. 1884

Maloney Bros. Nursery Co. Inc., 33 Main St., Danville, N.Y.

**MALONEY CATALOG FREE**

*New edition*  
**FREE BOOK**

**DISSTON** MANUAL

The New Disston Saw, Tool and File Manual is full of ideas for farmers who use tools. A 48-page book with more information, pictures and text, and many helpful hints on the use and care of tools... how to set, file, refit saws; illustrations of merchandise.

Disston Pruning Guide shows ways to get best results from garden, orchard, vineyard. New Manual or Guide, or both, sent FREE!

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167 Tacony, Philadelphia

Send me free ☐ New Saw Manual; ☐ Pruning Guide  
(Check one or both, as wanted)

Name University of Idaho

Address LIBRARY

PAGE SCOW IDAHO

## EASTERN MARKETING

(Continued from page 24)

Day" which appeared in November *Woman's Home Companion*. We put the million reprints in 10,000 stores—100 reprints to a store—and we acknowledge thankfully the efficient help in this work of that genial hustler, W. B. Baughman, treasurer of National Apple Institute.

There must, of course, be a definite program behind the appeal to wholesalers and retailers for their aid in increased apple selling. You can't just walk up to them and say, "Here's some stuff. Help us, will you?" We have developed two rather definite programs; one for the retailer, another for the wholesaler. The retailer is asked to use our display materials and sales aids, to stage suitable displays of apples along with these materials, to give apples as much assistance in his advertising, in newspapers, handbill or radio, as he can. We supply mats, free, for the advertising. We tell him to buy his apples through his regular channels. We do not insist that he use Appalachian apples, but we do suggest that GOOD apples are the most profitable. We emphasize the profit in apples to him, and that mass displays are the most powerful sales agent, since good apples have natural appeal in themselves to an unusual degree. We supply him with attractive literature suggesting effective displays, telling the important points about apples from the customer's standpoint as well as his own, the proper season for varieties, and similar information.

For the wholesaler, we have another specific program. It outlines the organizing of his salesmen for special apple work with the grocers to help him in placing the display materials and in building the displays of apples in the store; in seeing that the store clerks are instructed in selling points on apples for the customers and on the merits and values of apples; in staging "related displays" of other things needed in cooking apples, such as milk, lard, flour; in assisting the retailer to build effective apple display racks; in putting on "sampling" demonstrations; in co-operating with local food shows, and such tangible things.

Our limited experience with "sampling" indicates that it is highly valuable. By "sampling" we mean giving an apple, and a piece of apple literature, to customers in the store. We provide the person who passes out the gift with apples and literature, and we pay for the apples given away, buying them as a rule from the grocer in whose store we are working.

There is this for us to think about—the grocer is our SALESMAN. We have been looking at the wholesaler and the retailer as apple buyers. They are buyers. But they are also (and this is much more important) apple salesmen. They sell our apples to the public. We must depend upon the grocers for that. Make no mistake about that. What if the commercial orchardist had to take his crop and peddle it door-to-door? What would the cost be? And how much of our nation would be reached every day with apples?

After all, the grocer is a pretty good fellow, about as good and just about as bad as the apple grower. He is trying to make a living. He is our salesman, the salesman for our apples to the public. It is the part of wisdom for apple growers to cultivate the friendship, the good will, and the apple understanding of our salesmen, the grocers.

This is phrased most pungently by one of the nation's leading grocers, Gerritt Vander Hooning of Grand Rapids, Mich., president of the National Association of Retail Grocers. Says Mr. Vander Hooning (he was talking to a gathering of apple men when he said it):

"The day is past when a grower, pro-

(Continued on page 28)

AMERICAN FRUIT GROWER

## BIGGER, BETTER YIELDING STRAWBERRIES

### FOR LESS MONEY

Stahelin's, with the largest supply of fine strawberry plants in the middle west, have REDUCED prices to the minimum. Think of it, **1000 plants for only \$2.75 and up.** Premier, Dorsett, Catskill, Wayzata and all grand varieties, millions of strawberry plants, at lowest prices. Our 1939 catalog lists everything for the fruit farmer, including

**\$2.75 UP  
PER  
1000**

### PEACH TREES

Michigan grown, hardy and well-rooted, also choicest varieties in Apple, Pear and Plum trees at new low prices. Bargains, too, in Blackberries, BLUEBERRIES, Raspberries, ASPARAGUS, Rhubarb. Write today — now — for Free Catalog.

STAHELIN'S NURSERY, Box 5, BRIDGMAN, MICH.

AS LOW AS  
**7 1/2¢**  
Ea.

## FREE PLANT CATALOG

Send Today For This Valuable 40 Page Strawberry Book.

Describes and illustrates in colors the leading varieties of Strawberries, Raspberries, Blackberries, Grapes, Fruit Trees, Etc. Gives complete culture directions written by a life-long berry grower. Tells how we grow our selected strain Townsend's Guaranteed Plants. Every fruit grower and gardener should have this book. A postal will bring your free copy.

**E. W. TOWNSEND SONS**  
106 Vine St., Salisbury, Maryland

## Peach and Apple Trees

Wholesale Price to Consumer Guaranteed and examined. True to name. All new experiment station sorts. Write for 1939 catalog today. 40 years leading fruit tree nurseries.

**Allen's Nurseries & Seed House**  
Box 6, Geneva, Ohio

## FRUIT TREES

Grown by Virginia's Largest Growers

Offered at considerably reduced prices. 500,000 PEACH in a large assortment of varieties and sizes. Buds cut from bearing orchards, assuring planters of trees true to name. 300,000 APPLE in the New Double Red Strains, as well as in the most popular standard varieties.

WRITE FOR FREE COPY OF OUR 44 PAGE PLANTING GUIDE and New Low Price List.

WAYNESBORO NURSERIES, Waynesboro, Virginia

## GRAPES—12 CONCORDS 50¢

POSTPAID. One year. Well rooted. Real bargains on large lots. 10 Everblooming Roses 1 yr. all different \$1.00 postpaid. 45 Russian Mulberry, a 50 ft. Hedge for \$1.00. Over 100 bargains in our catalog. Big cash discount for early orders or will ship express C. O. D. if you prefer. Examine stock before you pay. Write today.

Whitten-Ackerman Nursery, Box 61, Bridgman, Mich.

## MAKE YOUR LITTLE FARM PAY

Get a **BOLENS** heavy duty Garden Tractor for plowing, harrowing, discing, field and garden cultivating, mowing, spraying, digging, belt power. Also **BOLENS** Power Hoe and other models, for light gardening and lawn mowing. \$79.50 up f.o.b. factory. It's fun to run a **BOLENS**.

**BOLENS GARDEN TRACTORS**  
1916 Park St., Port Washington, Wis.

## FRUIT TREES

Peaches, Pears, Apples, Plums, etc. Excellent stock. Write for catalog. Box "A," The Storrs & Harrison Company, 85 years at Painesville, Ohio.

## SEED

WRITE FOR CATALOG **FREE**

To make NEW friends write 1111

GIVE 8 varieties fancy Petunias; 7 kinds New Zinnias; 6 var. splendid New Astors; 12 kinds delicious Radishes; 11 var. crisp Lettuce; 9 kinds fancy Tomatoes & 8 var. Onions (Value \$1) all for 10¢ handling & postage. For return mailing & this offer with 3 neighbors' names who have gardens enables you to receive 3 Hardy Phlox plants and 2 Roses as a GIFT and New Catalog.

**NEWASTES**  
THE GLOBE SEED CO. Box 20, St. Charles, Ill.

JANUARY, 1939



## WESTERN MARKETING

(Continued from page 25)

as any selfish motives or desires are concerned.

Evidence of this co-operation was clearly shown in connection with the spray residue problem this year, where relief was actually secured in tolerances on both lead and fluorine, which only the year before officials had stated must be lowered rather than raised.

None of us by our advertising and promotional efforts expect people to eat more every day. Possibly it is true the average American eats too much now. But does he eat fruit and vegetables to the extent he should? Dr. Ira A. Manville says "no" in no uncertain terms and quotes figures to show that, nationally, we eat approximately as follows: dairy products, 24 per cent; wheat and cereals, 37 per cent; sugar, 20 per cent; meats, 13 per cent; and fruits and vegetables, 6 per cent. Certainly we are on the right track for the health of the nation when we urge a heavier consumption of fruits.

Dentists say if you eat an apple in the morning after breakfast and one after the evening meal you can throw all your brushes, tooth powders, and paste away and you will have better teeth. I have told this to many dentists and, much to my surprise, have not talked to one who did not agree with the statement.

To those of you who are not familiar with our program in Washington, we have a legislative act which places an excise tax on apples, necessitating the payment of two cents per 100 pounds prior to shipment. This results in all apples produced in the State of Washington and marketed, except culls to bona fide by-products plants, paying this assessment. Railroads will not accept shipments unless the tax has been paid. Trucks cannot move fruit for sale without a clearance showing that the advertising assessment has been paid. The total amount collected runs a little less than a quarter million dollars yearly.

In our advertising we do not stress our region particularly. It is necessary for us to identify our advertisements, display material, radio broadcasts, etc., as pertaining to Washington State, but we do not elaborate on this point. We feel that our advertising is of greater benefit to all apples than it is to apples from Washington alone. After all, the real job is to increase the consumption of fruits. In our particular instance, of course, of apples.

Research we have been carrying on at the University of Oregon Medical School for a period of some four years is being used by all the producing areas, and the food and health values derived from this research applies to all apples, with only slight variation in some values as regards varieties. We have just made an appropriation for additional work at the University of Chicago and Northwestern University to confirm and enlarge upon the findings already made by Dr. Manville.

It will surprise you to what extent the American Medical Association, Good Housekeeping Bureau, and others, have accepted the facts obtained by this research without confirmation from other institutions. To get the full benefit, however, this confirmation is necessary.

I sincerely hope that in the not too distant future it will be possible that other producing areas will have a legislative act, or some arrangement that will bring about a revenue from practically all the apples produced in the United States. We in Washington would be only too glad to appropriate from one-third to one-half or more of our assessment for national advertising and research that applies to all apples and use the balance for work in special markets.

JANUARY, 1939

## THESE

# BETTER VARIETIES PAY!

## WHEN OTHERS MAY NOT PEACH

# REDELBERTA

U. S. Plant Pat. 232  
Trade Mark Reg.

Discovered in 1928. 10 Years Fruiting—Testing—Proving.

Here's the real Elberta in a new dress with fully double the red color—and earlier ripening. Redelberta goes to the earlier market and brings higher prices.

Write for free folder giving full information about this fine peach. Redelberta is an outstanding peach for commercial planters.

From Coast to Coast planters are finding these Better Varieties more profitable. They are improved and highly colored. Thoroughly tested. Introduced by our Company. They are making more money for growers.

Double the Red Color of Elberta. 10 Days Earlier than Elberta.

**RICHARD**  
DELICIOUS

Trade Marked. Deep Red. One of America's leading commercial apples. Nearly 100% Extra Fancy for Color.

**SHOTWELL**  
DELICIOUS

U.S. Plant Pat. No. 90. Trade Marked. Earliest coloring "solid red" Delicious.

**BLACK JON**

Trade Marked. 97% Extra Fancy for Color. A finer, better, more profitable Jonathan.

**BLACK MAC**

Trade Marked. Early coloring all-red McIntosh. Has produced 90% Extra Fancy color.

**BLAXTAYMAN**

Trade Marked. A bright, rich red Stayman. Approximately 90% Extra Fancy for color.

**See And O**

Winesap—Has averaged 85% Extra Fancy Color and increased per acreage returns 33% over common Winesap.

**See And O**

Red Rome—A beautiful All-Red Rome with all the fine qualities of old Rome—but coloring earlier and practically 100% Extra Fancy for color.

**RILAND**

Apricot—Plant Pat. No. 74. Trade Marked. New, large, highly colored. Brings top prices. Splendid shipper, canner.

WANTED  
A FEW MORE RELIABLE SALESMEN

FREIGHT PREPAID

We Ship Everywhere  
Safe Arrival Guaranteed

WASHINGTON'S OLDEST — LARGEST NURSERY

## YOU CAN DEPEND UPON C. & O. TREES

For 32 years we have been engaged in the nursery business in the Wenatchee Valley.

Our Company has introduced, Trade Marked and Plant Patented outstanding commercial fruit varieties. C. & O. trees are the foundation for some of America's finest orchards—East and West.

Write for Catalog

**COLUMBIA & OKANOGAN NURSERY Co.**

WENATCHEE, WASHINGTON  
Dept. A-1

Write for FREE

Redelberta Color Folder

## BLUEBERRIES A PROFITABLE ORNAMENTAL

Be the first to raise CULTIVATED BLUEBERRIES. The coming season. Very ornamental. Exquisite white blossoms; leaves change from green to red; grows 6 ft. tall. Eat delicious jumbo sized berries with cream. Two to four bushes will supply average family with mouth-watering blueberry pies all season. Big money-maker for planters. Sell from 50c to 75c a quart. Fully described in our catalog of over 100 real bargains in plants, trees and shrubs. Write now. Whitten-Ackerman Nursery, Box 39, Bridgman, Mich.



**STRAWBERRIES**  
Allen's 1939 Berry-Book Describes Best Methods, Plants, Varieties: Premier, Fairfax, Dorsett, Catskill.  
**COPY FREE WRITE TODAY**  
THE W. F. ALLEN CO.  
284 Evergreen Ave., Salisbury, Md.

**Just Out! AMERICA'S MOST BEAUTIFUL FREE! Nursery and Seed Book**  
From America's Largest Direct-To-You NURSERY! New, different, better. Sensational new flowers, fruits, seeds, shrubs, World's Fair roses, etc. Natural colors. Guaranteed stock. Low prices. Gifts and Planting Guide free to customers. Write today. Inter-State Nurseries, 2319 E. St., Hamburg, Iowa

**FREE AMAZING OFFER 4 PKTS. Petunias VALUE 10**  
Just to get acquainted with new customers we send 4-100 pkt fancy Petunias, including New Rusty Red for only 4 names flower lovers—Will include 5 beautiful spring flowering bulbs & 100 Rusty Red for 10c to cover mailing and postage. For return mailing and this ad. enables you to receive a FREE 100 OFFER 2 beautiful Everblooming Roses & 3 Canas. New Garden Book. Supplied. Send today. S. W. Pius, Seedman, Dept. 111, St. Charles, Ill.

## Scarff's FALL BEARING "SWEET" CHERRY SEPTEMBER

The only Fall Bearing cherry known. The fruits are bright red, meaty and delicious flavor for eating fresh and canning. Tree bears at early age. **NEW SEEDLESS PEAR**, practically coreless—Bartlett type and quality. Apparently resistant to blight. New low prices on the "Hardee Frost Proof Peach." Marcy—largest of all Red Raspberries, large Red Lake Currants and Peewee Gooseberries, famous Whitehog Blueberries, Boyesenberries and many other excellent varieties—from Scarff's 1800 acres in the famous Miami Valley. Send for our Golden Anniversary Catalog Free. W. N. SCARFF'S SONS, Box 31 New Carlisle, Ohio

## FRUIT TREES THAT PAY!

Townsend's Fruit Trees will be strong, healthy, heavy yielders because they are propagated from parents with these outstanding characteristics. Vigorous growth and earlier yields are assured. Every Townsend tree comes "Sealed and Certified." This is your assurance of heavy yielding, true-to-name trees. All leading varieties of apple, peach, pear, plum and cherry trees. Send for Free Book that tells why Townsend's Trees are sure money makers. Do It Now. E. W. TOWNSEND SONS 700 Vine St., Salisbury, Maryland

## OPPORTUNITY ADS

Only 15c a Word—CASH WITH ORDER  
ADDRESS: AMERICAN FRUIT GROWER,  
1370 Ontario Street, Cleveland, Ohio

### BABY CHICKS

MAKE MONEY WITH POULTRY. READ AMERICA'S leading poultry magazine for latest information. Three years \$1.00; nine months 50c. POULTRY TRIBUNE, Dept. C-37, Mount Morris, Illinois.

CHICKS \$6.45 PER 100. SIX BEST BLOOD-TESTED breeds. Our 29th year. Write KEYSTONE FARMS, Richfield, Pennsylvania.

### BEEES

BEEES—GOOD SIDE LINE. PLEASURE. PROFIT. Send \$1.00 for book "First Lessons in Beekeeping" (1938 edition), and one year subscription. Catalog free. AMERICAN BEE JOURNAL, Box G, Hamilton, Illinois.

### BERRY PLANTS

EARLY RIPENING THORNLESS BOYSENBERRY. Only genuine plants this sensational berry. New Sweet Nectarberry outfields Boysen. Bauer Thornless Loganberry, others. Buy from original plantings. Cultural Guide Free. BENEDICT RANCHO, 1937 Deana, El Monte, California.

200 YELLOW FREE BLAKEMORE OR DUNLAP plants delivered. \$1.00. Free catalog on strawberries, Nectarberry, Boysenberry and Youngberry. WALLER BROS., Judsonia, Arkansas.

BUY CERTIFIED YELLOW FREE BLAKEMORE strawberry plants from originator. \$2.50 per thousand; 100,000, \$2.25 per thousand. R. B. McUMBER, Greenfield, Tennessee.

STRAWBERRY PLANTS—AROMA. BLAKEMORE. Klondyke, Missionary, Dunlap, \$1.75 per 1000. Premier, Dorsett, Fairfax, \$3.50 per 1000. JOHN LIGHTFOOT, Birchwood, Tennessee.

NEW CALIFORNIA BERRIES. NECTARBERRY. Thornless Boysenberry, Perfection Everbearer and others. POLLARD'S BERRY NURSERY, Chino, California.

GEM EVERBEARING STRAWBERRY PLANTS. \$4.00 per 1000. THOMAS KATES BERRY FARM, Cherryville, Pennsylvania.

### CROTALARIA SEED

CROTALARIA SEED: SPECTABILIS, INTERMEDIA, Striata. Also Alyce Clover. Reserve now for spring delivery. GRAND ISLAND NURSERIES, Eustis, Florida.

### DAIRY GOATS

RAISE DAIRY GOATS—INFORMATION. SAMPLE monthly magazine FREE. DAIRY GOAT JOURNAL, Dept. 905, Fairbury, Nebraska.

### EVERYTHING FOR THE ORCHARD

PRUNING, GRAFTING, BUDDING TOOLS—KNIVES, Saws, Shears, Hand and Pole Pruners, Jones Patch Budders, Waxers, Wax Melters, Raffles, Rubber Budding Strips, J. & J. Nursery Tape, Tree Seal, Tree Kote, Sa-Va-Tree, Hormodin, Pest Moss, Tree Surgeon Supplies.

SPRAYERS, DUSTERS, MATERIALS—POWER AND Hand Sprayers, Spray Materials and Dust Mixtures. Hand and Power Dusters, Sprayer Accessories, Guns, Rods, Nozzles, Hose, Weed Killers, Wood Preservatives, Hydrometers, Hygrometers, and Magnifiers.

GROWING AND HARVESTING EQUIPMENT—Cultivating Equipment, Ladders, Picking Bags, Baskets and Buckets, Orchard and Storage Crates, Wire Pickers, Pickers' Tickets, Packing House Trucks.

FRUIT PACKING EQUIPMENT AND SUPPLIES—Conveyors, Graders, Washers, Dryers, Polishers, Washing Chemicals, Caps, Liners, Cushions, Wraps, Shredded Oil Paper, Basket Turners, Jiffy Ladders, Barrel Presses, Nails, Hatchets, Stencils, Stamps, Ink, Brushes, Nail Strippers, Sizing Rings, Labels, and Paste. Cider Presses and Containers, Apple Butter Cookers, Shipping and Display Packages. State items of interest—no general catalog. Special rates Schools, Institutions, Experiment Stations. EDWIN C. TYSON, Wholesale and Retail, Flora Dale, Pennsylvania.

### FARMS WANTED

WANTED—TO HEAR FROM OWNER OF FARM OR unimproved land for sale. WM. HAWLEY, Baldwin, Wisconsin.

### FEMALE HELP WANTED

SELL DRESSES AS LOW AS \$1.24 TO FRIENDS. Experience unnecessary, but write fully. HAFORD, Dept. P-153, Cincinnati, Ohio.

### FOR SALE

ALTAMONT ORCHARD—ONE OF OHIO'S LARGEST and most productive apple orchards; 300 acres of rolling land; 9950 trees in their prime; 6 room house with Delco lights; large two-story packing house and other out-buildings. Farm and modern equipment appraised at \$56,676. Write McFADYEN & SWISHER, Attorneys, Beggs Building, Columbus, Ohio.

40 ACRES ON STATE ROAD; 7 ACRES TIMBER; 22 acres apple orchard; 6 acres bearing; beautiful home site; electricity; coal; terms, \$5,000. V. L. COOPER, owner, Magnolia, Ohio.

ORCHARDS OF SMALL AND MEDIUM SIZE IN FIN-est of all year climate. Best Varieties. Cottages. HENRY P. CORWITH, Saluda, North Carolina.

THREE BEAUTIFUL BUFFALO ROBES. PROPERLY tanned by experts. Measure 7 x 7 feet. Splendid heavy fur over entire skin. Reasonable. Address Box 44, AMERICAN FRUIT GROWER, 1370 Ontario St., Cleveland, Ohio.

### MISCELLANEOUS

EVENTUALLY YOU'LL LIVE IN FLORIDA. KEEP in touch with its agricultural opportunities by subscribing to its leading citrus and truck magazine. 50c per year; 3 years, \$1.00. FLORIDA FARM AND GROVE, Jacksonville, Florida.

### TRACTOR PARTS

NEW AND USED TRACTOR PARTS AT TREMENDOUS Savings—Write for free 1939 Catalog. CENTRAL TRACTOR WRECKING COMPANY, Boone, Iowa.

(Continued in third column)

## EASTERN MARKETING

(Continued from page 26)

ducer, or manufacturer can pack his merchandise in a car, wave it goodbye, and then hope for a reasonable return on that merchandise. Likewise, the time is past when the local wholesaler or jobber who deals with the retailer can forget the produce as soon as the sale to the retailer is made. It should be seen to that the merchandise is properly displayed and merchandised in the retail store. In other words, your job is not finished until your product is on the American table, prepared for immediate consumption.

"In your eyes, your produce is the most important item in the retail store. But to the retailer, your product is only one of the from 3000 to 5000 items which travel across his counters every day. Of course, the grocer wants to sell as much of each item as possible, but the products which receive the most sales effort from him are the ones about which he knows the most and on which he has received the most sales assistance.

"Let me talk to you as an individual retail grocer. As a grocer, I cannot be expected to know everything about your products—their origin and growth, their many uses, the best ways of caring for them so they may be kept fresh and appealing and appetizing. There are too many items in my stock for me to take the time and effort necessary to learn all about one single individual item or group of products.

"But if you will keep me informed about all these things, I can properly care for your merchandise, advertise it effectively, display it invitingly, and really 'sell' it to the consumers in my territory. Multiply my case by the many hundreds of thousands of individual retail grocers in the country, and you can quickly see how many salesmen are ready, willing, and anxious to work for you, if you will give them the 'selling points' about your merchandise.

"You find today that America is not 'apple minded.' Other industries or groups of growers have helped the grocer to learn more about their products. They have helped him build displays, given him all kinds of merchandising helps, and he is really doing a selling job for them. It would be mighty good business for your various groups to inform grocers about the uses of their particular types of apples."

There, in an authoritative nutshell, is stated the need for this grocer-service work we are doing for apples.

## CITRUS

(Continued from page 10)

front, Schoepf urged merchants to feature five-cent glasses of grapefruit and orange juice. His campaign resulted in citrus fruit sales being boosted as much as 700 per cent in some stores. With similar action, he's lately been after hotels and restaurants to serve Florida's winter tourists with orange juice at every meal.

By thus calling all resources into play, the citrus industry is meeting the greatest marketing crisis in its history, is in reality laying the groundwork for a super-promotion system that is bound to be needed as citrus crops increase. Barring probably infrequent shortages due to weather or other factors, Federal forecasters tell us that we can look for greater citrus production in the future. So today's success in marketing will mean security for tomorrow's sales of citrus crops.

## A Wonderful Place for You and Your Family

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## OPPORTUNITY ADS

(Continued from first column)

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NEW VARIETIES, PEACH AND APPLE. MARKHAM FRUIT BREEDER (Catalogue Free), Xenia, Illinois.

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# NEW

- EIGHT-TRAY CONTAINER
- THREE-WAY PRUNER

By HANDY ANDY

Besides the great amount of research being carried on by firms who serve fruit growers, we find that some of these manufacturers have formed associations and the associations have in turn established research departments. Information reaching us from these laboratories is often of interest to growers. To the best of my ability, I'm going to glean from the array of facts presented by these researchers those that are of importance to fruit growers and will present them here from month to month.

## EIGHT-TRAY CONTAINER •

Here's a new type container that has been perfected for the Michigan Apple Institute by the National Container Association. Eight of the corrugated consumer units are contained in the box, which is fitted with a vertical center support. The individual trays are flanged at the top edges



and hold from 12 to 16 apples according to fruit sizes. Space is provided on the ends of the trays for the grower's name and address, variety and grade of apples, and the number and size of the apples in the tray. The same information is shown on

the outer container. Photo here shows opened container illustrating arrangement of the trays, two sealed containers, and one of the individual trays. In the trays, two and a half inch apples are packed with cheeks up while larger apples are arranged with blossom or stem ends up.

Trays are received by growers in knocked-down form and stitching is done at the packing house or central supply stations according to the quantity desired under varying packing conditions. When fruit is packed in the trays and the trays are placed in the master container, sealing of the outer box is easily done by using silicate of soda, a liquid adhesive, for the bottom flaps and a special printed tape for the top. Retailers are in favor of this pack, it is reported, because each unit is a clean sale with no "left-overs" and eye-appealing displays are easily set up. One Wisconsin shipper has successfully used the eight-tray container, printed with his own design, on the Chicago market.

## THREE-WAY PRUNER •

When fruit enthusiast John Kraus decided to develop a new type of pruner he went at the job thoroughly and he's devised a three-way pruner combining saw, shears, and cutting edge. Another of his introductions consists mainly of a saw topped with two cutting edges. Both pruners are being held by Mr. Kraus in the accompanying illustration. Mounted on a long tubular steel pole, the three-way pruner is adaptable for reaching high branches, which may be sawed, sheared, or



cut off depending on the position, size, and type of cut desired. Blades of the saws are changeable and may be turned to take care of difficult cutting angles.

A new book, PROPAGATION OF PLANTS, a revision of an earlier standard work on the same subject, has just been issued. Its authors are M. G. Kains, former professor of horticulture at Pennsylvania State College, and L. M. McQuesten, who was formerly associate in pomology at the University of California. This new, fully illustrated volume covers propagation by seeds, layers, grafting, and budding, and has chapters on nursery and greenhouse management. Also included is a 38-page section on fruit tree stocks.

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## DEVELOPS METHOD TO STOP CHICKEN DAMAGE

"FIRST of all, I would like to say that I find your department very helpful. The short cuts save sweat, and that is what we are all looking for," says Iowa fruit grower T. B. Short, and at the same time he sends in the following suggestion:

"Here is something I've tried and it seems to work. On the farm, most of us know that many times with newly-set trees the chickens will scratch around the roots and seriously damage the young stock. I get a piece of woven wire three or four feet high. On most farms there's a roll of old wire left over from some fencing work. I then cut lengths of about four feet, and about half way across I cut the cross wires and bend the ends back. The ends are bent so there will be no injury to the trees. The wire piece is then slid about the tree so the tree fits in the cut notch. Possibly rocks or small stakes may be needed to make the wire lie flat. When I want to hoe around the trees, I take up the wire, kill the weeds, and replace the wire."

## GOOD TREE AND FRUIT GROWTH IN HOT CLIMATE

WHEN Mervin T. Lyons decided to grow apples in the hot climate of southern California, he didn't let tradition stand in his way. Here is what he says about his experiences:

"I live in the country 34 miles south of Fresno, where the temperature is often 100 to 115 and sometimes 120 degrees. People used to say that it was too hot to grow apples here and that the trees would not bear well, the fruit would be of poor

# \$1.00

## EACH FOR YOUR NEW IDEAS

Here, each month, growers get together to discuss experiences and ideas. The beginner as well as the veteran discovers many practical suggestions for better and more profitable fruit growing. You, too, have some experiences that will be helpful to fellow growers. Send them—briefly written on a penny card is satisfactory—to "ROUND TABLE EDITOR," AMERICAN FRUIT GROWER, 1370 Ontario St., Cleveland, Ohio. One dollar will be paid for each item published on this page.

quality, and the trees would blight severely. But I made a trial planting of Golden Delicious and Delicious trees. When the Golden Delicious tree was a year old it

bore eight apples, and when two years old it produced 60 apples. At the age of six years, my tree produced 306 pounds of apples, and only 25 of these were small, and there wasn't a wormy apple in the lot. Last year's production on this tree was 760 pounds after two-thirds of the set fruit had been removed when thinning. This was when it was 10 years old.

"The red Delicious tree is a year older than the Golden Delicious and when it was nine years old it bore 200 pounds. Then, two years later, in 1937, it bore 585 pounds. Individual fruits from this tree were larger than those from the Golden Delicious and were highly colored.

"The trees blighted slightly only one year. Six spurs and twig ends on the red Delicious and 24 on the Golden Delicious were blighted that year and had to be cut off.

"I like the Golden Delicious apple. In central California, the Yellow Bellflower sells 10 times better than any other kind. We have a yellow apple market.

"Some of our fruit was sent to relatives in the East and they reported that the quality was just as good as that of the better apples produced in their sections. Purchasers of the apples in our locality also comment on their good quality. I have had a great deal more success with apples than with anything else. Last year's crop from the two trees that I have mentioned was worth \$30. This more than paid for taxes on one 10-acre plot of land."

In the illustration at left, six-foot-tall Mervin Lyons stands beside his three-year-old Golden Delicious tree to give an idea of its size. Below is shown his red Delicious tree that was propped to bear its crop at 11 years of age.





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MOSCOW  
Kind of Fruit

IDAHO  
No. of Acres

# KEEP THESE TWO OUT OF YOUR ORCHARD!



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